The DRUG and COSMETIC INDUSTRY

FEBRUARY 1937

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The Drug and Cosmetic Industry is published monthly by Drug Markets, Inc., Frazer V. Sinclair, President and Treasurer; Thomas R. Farrell, Vice-president and Secretary. Publication Address, 28 Renne Ave., Pittsfield, Mass. Editorial and General Office, 101 West 31st St., New York, N. Y.

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THERE IS NO DIFFERENCE

THE difference between the Department of Agriculture or the Federal Trade Commission regulating the advertising of this industry amounts to the difference between tweedle-dee and tweedle-dum. To think that one department would be more lenient than another in enforcing a law is not straight thinking. Any government department must enforce a law according to the way the law is written. There is no guarantee that any department will not be manned by unreasonable officials at some time in the future, nor is there any guarantee that officials of any department seeking additional power will not become drastic in enforcement once that power has been obtained.

ONE thing that the industry does not want is dual control of advertising by two different departments such as is included in the latest draft of the Food, Drug and Cosmetic Act. Under this bill the Food and Drug Administration is given the power to enforce truth in advertising in the public interest, but the Federal Trade Commission retains its power to enforce truth in advertising in the interest of fair competition between manufacturers. Under this bill the manufacturers would have to answer to two departments, each of which would view advertising truth or falsity from different angles.

THE things that are really important in any bill regulating advertising are definitions of advertising, methods of enforcement, and penalties for violations. Which department is charged with enforcement makes little or no difference except for the reason that the department might from its very nature be predjudiced such as would be the case with the Public Health Service.

NEW and NON-OFFICIAL

WE CANNOT GET OUT OF OUR MINDS the fact that the independent retailers and the wholesalers have been the main proponents of price stabilization laws because they wanted the independent retailers be able to stop the growth of chains. We have maintained—and see no reason to change our opinion—that price stabilization in itself will do more to promote the growth of chains than it will be to stunt their growth. The reasons for this are clear as crystal. In the first place, chains will be forced to take a profit on nationally advertised goods, and secondly, they will have a wider spread by means of which they can increase the volume of private brand merchandise which they sell.

We are of the opinion that chain store profits under price stabilization will be considerably better, and we anticipate more attractive chain stores and more of them. The only thing that stands in the way is the possibility of the Robinson-Patman Law lessening the advantage of chains, and the likelihood of greater taxation if they do show any marked signs of growth.

THE MATTER OF TRADE-MARKS is receiving increased attention on the part of many manufacturers since the cellophane trade-mark was lost by DuPont Even DuPont officials themselves are becoming concerned and are of the opinion that trade-marks containing the Du or the Pont syllable should be changed. They have changed the name of their new plastic from Pontalite to Lucite for this reason. The danger of losing a trade-mark through generic use, such as was the case in cellophane, aspirin, and others, has become so important that even Alka-Seltzer is specified as a brand of effervescent analgesic alkalizing tablet. Some manufacturers of products of secret formulas are worried for fear that imitators might use their marks. But they should have no worry on this score as evidenced by the famous 4711 Eau de Cologne decision. This was the case in which an American company owned the rights to the trade-mark in this country, while the original German company was the only one in possession of the formula. The court decided that the owner of the trade-mark rights in this country was deceiving the public because it could not possibly deliver the product which was designated by the trade-mark. For this reason, products of secret formula which are not subject to exact analysis do not have to worry about losing their trade-marks through the marks being used in a generic sense.

JUST TO SET THE PICTURE STRAIGHT as to whom credit should be given for the air-tight price maintenance condition that now exists in California and Illinois, and may shortly exist throughout the country, let us tell the following story. A short time after the original California Fair Trade Act had been in force, the late A. H. Beardsley, of the Miles Laboratories, was in California. One of the people active in retail circles there told Mr. Beardsley of the difficulties they were having with the Fair Trade Act due to the fact that those who did not sign contracts could not be controlled. Mr. Beardsley replied that he was glad that the matter had been brought up for the reason that he was in California to meet his attorney, Edward S. Rogers, who was returning from a trip to Japan. Mr. Beardsley said he would try and arrange a meeting the next day.

Came the next day and Mr. Beardsley, Mr. Rogers, and the other gentleman had lunch to discuss the matter. Mr. Rogers finally turned over the menu in the restaurant and wrote the famous section 1½ of the California act, which became section two of similar acts, and which binds non-signers of fair trade contracts.

Finally, with great aid from Mr. Rogers in the form of favorable arguments, the section was made an amendment to the Fair Trade Act of California. Then the battle through the courts began. Mr. Rogers was most active in these, finally appearing before the U. S. Supreme Court, there to win a favorable decision as he had in the other courts. Therefore, to the Miles Laboratories and their attorney, Mr. Rogers, should go the lion's share of the credit at least so far as the manufacturers are concerned.

THE RETAILERS IN IOWA are taking the Fair Trade Act real seriously. They want a full 33 1/3 per cent on the maintained minimum. Therefore if a manufacturer of a fifty cent seller sets his minimum at thirty-nine cents, they do not want to pay any more than twenty-

Our Family Album

Another typical medicine advertisement of years gone by.

six cents for it instead of paying thirty-three cents. They want this price for every retailer whether or not he sells at thirty-nine cents or fifty cents. This is the sort of thing that is going to give the manufacturers real headaches. It was hard enough to satisfy the retailers without price maintenance, and it is going to be still harder with price maintenance. Under price maintenance the manufacturer will be the loser no matter what he does.

ONE BY ONE MANUFACTURERS OF COSMETICS are including vitamins in their preparations. We note that Hinds Honey and Almond Cream now contains vitamin D. No remedial claims are made for the vitamin content, but the fact that the vitamin is there appears on the label. Likewise we heard of a new hair tonic shortly to make its appearance which will contain vitamin D. These are in addition to the well-known vitamin D creams which have long been on the market, and in addition to the steadily increasing number of cosmetics containing vitamin F which are constantly being offered. There can no longer be any doubt that the cosmetic manufacturers have become vitamin conscious.

THE DRUG TRADE DINNER to be held on March 4 in New York promises to top all others in attendance and that is really something. The importance of this gathering of upwards of sixteen hundred men from the drug, cosmetic, chemical and allied trades is now nation wide. There is no other gathering held anywhere in the country at which the attendance of men in this industry is so high. In fact there is probably no other gathering that even approaches the 1,000 mark. And the people attending this dinner are people of importance in their companies and people which should be known by those who want to get somewhere in the industry. This is the opportunity to meet these people. Do not delay sending reservations since it is certain that this year the ballroom of the Waldorf-Astoria will be completely filled. Tickets are eight dollars each, and reservations should be sent to Ray Schlotterer, 41 Park Row, New York.

SOMETIME WE WONDER WHERE this industry will be when the Robinson-Patman Act is really enforced to its full limit, when price maintenance laws are in effect in every state of the Union, and when, perhaps, Mr. Patman is able to get some more of his laws enacted.

The first thought that enters our mind is that private brand merchandise will increase in volume—this much we are certain of. Then we believe that advertising of large manufacturers necessarily must decrease due to diminished volumes of sales. Unfortunately this will decrease the drug store traffic due to the fact that people are, to some extent, driven into drug stores by advertising. This should reduce the total volume of the goods which the industry sells. Against this we are apt to place the lower prices at which products will be bought if private brand merchandise take a large share of the market. Likewise, if private brand merchandise presents serious competition to manufacturers of nationally advertised goods, the prices of the advertised goods must be lowered.

Whichever way we look at the future under these laws we forsee a decrease in advertising by the large manufacturers or else a desperate struggle for them to survive by means of super-advertising. If prices of large manufacturers, are advanced due to price maintenance we might see an increase in the number of manufacturers due to growth in the number of smaller manufacturers operating in localized areas with unadvertised merchandise. This would mean a gradual spreading out of the manufacturing industry —a sort of leveling-off process. But there will always be those who are able to advance ahead of others under any set of conditions, and consequently there will always be large companies and small companies, as there will always be profitable companies and unprofitable ones.

"We manufacturers must protect ourselves from the retailers."

THE A.M.A. HAS FINALLY taken formal action on regulation of cosmetics. However, this action has not been taken in the form of a council such as is the cases with medicines and foods, but rather has created an Advisory Committee on Advertising, of Cosmetics, which name is close enough to that of the committee of the Proprietary Association to cause the lifting of eyebrows.

Ostensibly, the Committee is to act only on advertising of cosmetics placed in the Journal of the A.M.A., but if we know those in charge of the association's affairs this is only the start. As a matter of fact, the A.M.A. has very little excuse for having anything to do with cosmetics, and this is one way of developing an excuse. The demand is made for the formulas of the products before they can be advertised in the Journal.

Members of the Committee are: Drs. Francis E. Senear, Chicago; Joseph J. Eller, New York; C. Guy Lane, Boston; Paul N. Leech, director of the Division of Foods, Drugs, and Physical Therapy, and Morris Fishbein.

IODINE

By ISABEL BENNEY

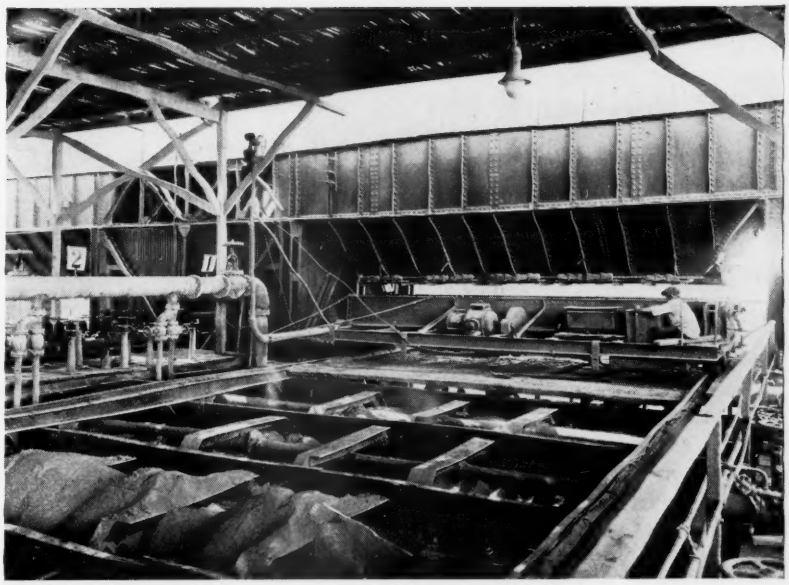
ONLY a few years ago iodine meant Chilean iodine at upwards of $3.50 a pound for 90% of the world's supply. If our iodine still comes largely from Chile, it is only because of substantial price concessions on the part of that country. And if Chile remains our chief source of supply, it will only be by the continuance of these low prices and the sacrifice for all time of the fat profits she once enjoyed from this industry. All of which is just another example of the seemingly inevitable economic suicide of world monopolies.

Iodine has, until very recently, been limited to medicinal use. Since its demand could not be stimulated in this field, there was little incentive for competition from other sources. Conversely, its high price eliminated its use in industrial fields where cost was an important factor. But excessively high prices of any commodity will lead to a certain amount of research by other countries for new methods of production. That this has happened in the case of iodine and happened successfully is borne out by the fact that iodine imports to the United States today are valued at only $.81 a pound and this country, formerly customer for 30-50% of Chile's iodine exports can now, if prices again rise to anywhere near their former levels, make more than enough for her domestic consumption—leaving a nice margin for the export trade.

Iodine is used chiefly as a medical supply, its antiseptic efficacy having long been known. In an alcohol solution it is potent, safe and penetrating and is used for skin affections, obstetrics, gynecology and surgical cases. It is an effective mouth or wound wash or vaginal douche. As a general disinfectant some hospitals sprinkle it about their rooms.

In the form of certain of its salts, such as potassium iodide (in which form 75% of iodine imports are used) and other iodides, it is used internally in many surgical conditions. One of these is the bone manifestations of tertiary syphilis. This disease reacts unmistakably to iodides in its tertiary stages and iodine offers a certain method of determination before operation. It is also efficacious internally for chronic lead poisoning; asthma; aneurism; arteriosclerosis; angina pectoris; gout; goiter; high blood pressure; haemophilia; Bright's disease; and bronchitis.

In salves and iodoform are large outlets. There has been a great deal of competition in its use as an external antiseptic from synthetic organic antiseptics such as resorcinol derivatives and metallic derivatives of certain dyes but the 1936 U. S. Pharmacopoeia gives tincture of iodine (7% iodine, 5% potassium iodide and alcohol solution) its usual place.



Iodine being a by-product of nitrate production in Chile, many steps in production of nitrate are necessary steps for production of iodine. At lower left is shown the drilling of blast holes in a nitrate bed. Lower right shows a general view of the crystallizing tanks. At right are shown the boiling tanks. Photos courtesy Chilean Nitrate Educational Bureau.

Synthetic medicines may be substituted for certain internal antisepsis but to date no competitor has been able to usurp the place of iodine in thyroid trouble. This is probably due to the fact that iodine is itself an essential constituent of thyroxin, the active principle of the thyroid gland. Hence it is *the* remedy for and means of prevention of goiter.

Goiter is rare among people who live near salt water. They get a certain amount of iodine content from the air they breathe and usually eat seafood—two hundred times as rich in iodine as any other known food. In inland sections, goiter is common. Iodine was formerly provided in sufficient quantities in salt but modern purified table salt lacked this element. Iodized salt is now on the grocer's shelves. In Switzerland the sale of untreated table salt is forbidden by law in certain sections, while in other parts of the country a small amount of iodine is added to the drinking water.

In industry iodine is comparatively new. It is used to some extent in sensitizing solutions for photographic films. It is widely used as a catalyst in the rubber industry. Experiments in anti-knock fuels have had promising results. It is utilized in the manufacture of certain dyes; as a positive disinfectant for anthrax on hides, it finds a place in the leather industry when its price is low. Other fields include lithography and paper testing; fiber staining and process engraving. While the amount is not known, it is believed that substantial quantities of potassium iodide are used in this country for the production of sensitized paper for bank check vouchers.

The lixiviation of copper ores with iodine has been tried to some extent in Chile, Argentina and the United States where low-grade ores will permit low cost operation.

In analytical chemistry it has been found invaluable. Iodometry has been adapted to almost every known substance. In volumetric analysis where small scale work eliminates the cost factor, iodine is valuable. The "iodine value" of oil or fat, or percentage of iodine the substance absorbs, gives a basis for classification in oil analysis.

In veterinary medicine it has found wide use. Colloidal iodine is a disinfectant and vermicide for poultry.

It is to animal husbandry that the Chilean iodine industry looks for its greatest new outlet. It seems to stimulate both the rate of growth and the fecundity of hogs and to increase the egg-production

of hens. Efforts have been made to push the sale of milk and eggs from iodine-fed cows and poultry. In 1935 Cornell University completed 8-year tests in feeding cows and chickens seaweed and reported eggs equal in iodine value to half a lobster—richest in iodine content of all seafoods.

In agriculture, iodine in fertilizer has been tried for greater crop yield but the results have not justified the expense. With cheaper iodine this situation may change considerably. Chilean nitrate of soda is, however, favored over the purified laboratory nitrate of soda because of its natural iodine content. Recently corn was reported to have been grown in Kentucky in iodine-treated soil which had grains containing enough iodine to supply the needs of seven adults for a day.

Many of these experiments are in their infancy. Many will be found impractical or dangerous. But withal, the outlook for iodine in new fields seems bright enough to warrant low prices.

* * * * *

Chemically, iodine is a purplish-black crystalline solid which derived its name from the Greek word for the color of its vapor-violet. A chemical element of the halogen group (salt-formers) to which belong bromine, chlorine and fluorine, it has the highest density of any non-metallic element and an atomic weight of 126.92. It is easily obtained at a high degree of purity because of the ease with which it may be sublimed, converting to a gaseous phase and condensing to crystals without intermediate liquefying.

Sparingly soluble in water, it readily forms a violet solution with chloroform, bromoform and other similar substances; a brown solution with ether, glycerol and alcohol as in its familiar household form of tincture of iodine; and a dark-blue compound with starch.

While resembling its kin in the halogen group, it is less energetic and has less affinity for most other elements than the other three and, with bromine, is less commonly found than either chlorine or fluorine. Its odor is penetrating but less pungent than that of chlorine.

* * * * *

Historically, iodine was discovered in 1812 by Courtois, a Parisian saltpeter-maker, while investigating the products obtained from the mother liquors of kelp. The latter was in great demand at the time for the value of its soda in soap and glass-making. This method has since been superseded by others. While Courtois made no commercial success of his discovery, it was announced by the French Institute the following year.

In 1815 Gay-Lussac showed that it was an element; shortly after this Courniere of Cherbourg started its manufacture on the coast of Normandy and it soon became a thriving industry both there and in Brittany.

Iodoform as an antiseptic was discovered by Serullas in 1822. It was not until 1873 that the antiseptic action of iodine was definitely established by Davaine. First written reference to its use in surgery came in 1884 in the Fourth Edition of "The Practice of Surgery" by Bryant. Several references followed between 1886 and 1905 by which time it was widely known as "safe and potent" and many claimed the honor of having introduced it.

Following its manufacture in France, it was produced in Glasgow commercially in 1841 from the lyes of the kelp-boilers. By 1846 a dozen or more firms were engaged in the business and old methods of extraction were abandoned. The kelp was treated directly and the potash salts sold as a profitable by-product. But the discovery of potash salts deposits in Germany caused a great drop in the price of the latter; the character of the kelp varied enormously; the price of iodine ranged from 4 to 34 shillings a pound; and the majority of the iodine manufacturers soon dropped out of the field. Kelp continued, however, as the only source of iodine in Europe for another thirty years.

As long ago as 500 B. C. the Chinese used a broth made from extractions from the thyroid glands of sheep to treat persons suffering from a neck swelling that is today known as goiter. In the nineteenth century, the story is that a French physician erroneously prescribed tincture of iodine instead of digitalis for a patient suffering from heart trouble. This patient also had a neck swelling. The mistake was discovered only after the patient had had several doses. Not only did his heart trouble improve (due to a better general physical condition) but the swelling diminished noticeably. It was not long until iodine was in great demand for goiter treatment.

* * * * *

Iodine was first obtained in Chile in 1862 as a by-product in the purification of crude saltpeter. Shipments were arriving in Europe in 1874. The rapid rise in demand around this time for iodine for medical purposes and the low cost at which Chile could produce it as a by-product of her thriving sodium nitrate industry gave that country a lead in its production that soon became a virtual monopoly.

During the World War Chile was producing 3,300,000 pounds a year with an estimated capacity production of 4,000,000 pounds.

There is an interesting theory of geologists explaining the large amounts of iodine found in Chile's nitrate fields. They believe that huge birds, thousands of years ago, feeding on vegetable and animal matter from the sea, migrated to the Andes where their droppings petrified to form caliche. This caliche, or nitrate-bearing earth, is today the greatest source of iodine in the world.

Concentrating in the mother liquor remaining after the nitrate has been crystallized out, it averages 8 grams per liter of liquor, or ½ to 1 pound per ton of earth. This liquor is treated with sulphurous acid or sodium bisulphite which liberates the iodine. The iodine is insoluble in the solution and is removed by filtration, washed, pressed into cakes and sold as crude iodine or further purified by sublimation. Barrelled in kegs, the kegs are sewn up in rawhide for shipping. Most of the imports in this country are in the form of crude iodine.

(Continued on page 188)

THE COSMETIC TAX

Only by the industry engaging in an organized effort from top to bottom can this tax be eliminated. The arguments on the side of the industry are weighty ones.

With Congress reconvened, this industry is organizing to have the manufacturers excise tax on cosmetics eliminated. The Toilet Goods Association has started the ball rolling by interviewing officials of the Treasury Department and by drafting a brief opposing the tax. Following these moves, it is up to the industry to carry on the battle. The reason for seeking the cooperation of the Treasury Department is that if the Department should recommend to the Congress that the tax be eliminated, the battle is ninety-five per cent. won. And if the Department does not go so far as to recommend elimination of the tax but adopts an indifferent attitude as to whether or not the tax is continued, the battle is fifty per cent. won.

While the Treasury Department is extremely important in this matter, the members of Congress are the ones who must actually repeal the tax. The repeal of the tax can only be brought about by the enactment of a bill passed by Congress and signed by the President. Because the members of Congress are the ones who must repeal this tax, it is up to members of the industry properly to organize and bring as much pressure as possible to bear upon representatives and senators throughout the entire country. Officials of trade associations can only go so far in a matter of this kind. These officials can present briefs and talk to government officials, but, after all, those being contacted in government circles are too apt to view these association executives as paid lobbyists. Resolutions passed by trade associations are also ineffective to a large extent unless the individual members of the associations send along their own requests.

Cosmetic manufacturers should line up everyone in their own companies behind repeal of the tax since it is distinctly to the advantage of everyone working in the cosmetic industry. The manufacturers should not only have members of their companies write to their senators and congressmen individually, but they should also talk to every one with whom they come in contact about the matter. Salesmen should be trained to give a short talk to wholesalers and retailers with whom they come in contact. These distributors should not only be requested to write to their representatives in Congress—or to contact them personally if they can—but they should also be requested to talk to their customers about it. Wholesalers' salesmen can talk to their retail customers about the matter, and retailers can talk to the men and women who come into their stores to buy cosmetics of any sort.

The main point that will appeal to the distributors and consumers of cosmetics is that the tax forestalls greater allowances for distributors and prohibits lower prices for consumers. Also appealing to distributors and consumers is the argument that the tax by the Federal Government has had the effect upon states of believing that the cosmetic business is one that can be taxed any time additional revenue is needed as is the case with tobacco products and liquors. The women of the country should quickly respond to this argument.

Manufacturers strongly intimate that either prices will be advanced or sizes of packages lessened due to steadily increasing costs. Elimination of the tax burden would remove this possibility. Sizes of packages will have to be lessened by manufacturers selling to fixed price syndicate stores if something is not done soon. It will be recalled that during the low point of the depression many interesting packages and many rather large sized packages were introduced in the syndicate stores. That was when raw materials, packaging materials, and labor were at low prices. Now raw materials, packaging materials, and labor have advanced and will advance further. To these people the tax makes the difference between continuing to supply present products or diminishing the quantities and probably cheapening the packages.

(*Continued on page 195*)

DRIVE

ALONG with other movements in which the "small men" of the country are organizing to better their lot we find great impetus being given to the movement to have U.S.P. and N.F. products used instead of the ethical specialties of the pharmaceutical manufacturers. The difficulty of promoting the use of official preparations heretofore has been that the physician is woefully lacking in knowledge of the use of drugs since the young physicians now practicing did not receive any such training in medical school. The only knowledge that these physicians have of the use of drugs has been given to them by the detail men of the pharmaceutical manufacturers who have detailed the physicians on their own specialties.

At a meeting of retail druggists held on a Sunday afternoon in December in Brooklyn, New York, a proposal was made that the retailers themselves detail the doctors to educate them to the use of official preparations. Furthermore, a proposal was made that the druggists undertake a cooperative newspaper and radio advertising campaign to educate the public regarding official preparations trying to instill in them the belief that the cost of prescriptions can be lowered if their physicians will prescribe U.S.P. and N.F. preparations, instead of just writing down the names of ethical specialties.

But the broad basic movement that has now been underway for about three months combines the efforts of the American Medical Association, the U.S. Pharmacopoeia Revision Committee, and the American Pharmaceutical Association. The plan calls for a series of articles to be published in the A.M.A. Journal, one article appearing in every second weekly issue of the Journal. These articles are designed to educate the physician on the use of U.S.P. preparations. Some of the titles of these articles are: "Drugs Used in the Treatment of Circulatory Failure in Acute Infectious Diseases," "The Choice of Analgesics," "The Choice of Ointment Vehicles in Dermatology," "The Use of Cathartics," "Use of Dermal Parasiticides."

Pharmacists are being urged to subscribe to the A.M.A. Journal, which should bring the A.M.A. in for some direct benefit in a financial way. For if the Journal circulation is sufficiently increased in this direction, the advertising rates of the Journal could well be increased. And this increase in circulation would not be wasted for the reason that advertisers in the Journal would be reaching the retail drug trade in addition to reaching physicians. Perhaps there would be a conflict of interest between the A.M.A. Journal, the A.Ph.A. Journal, and the many national, sectional and local

AGAINST SPECIALTIES

journals which depend entirely upon the retail druggists for their support.

In addition to subscribing to the A.M.A. Journal, pharmacists are asked to join the A.Ph.A. and their state and local associations which will aid in advancing the organized effort. Furthermore, the pharmacists are asked to detail their physicians on official preparations.

Reprints of the articles are to be available from the U.S.P. Revision Committee, and eventually the series of articles will be published as a bound book to be made available to students in medicine, medical internes, and physicians in practice.

This is the well thought out plan that is now under way to increase the use of official prepations at the expense of the ethical specialties of pharmaceutical manufacturers. And there is no doubt that the plan is one that should bring results to those behind it. The articles running in the A.M.A. Journal are excellent for the purpose and should command attention.

How far such a movement can go or how long it can last depends on keeping the interest of the rank and file at a high pitch. It is safe to assume that the interest of the average pharmacist will not long remain great enough to have him read these articles and then detail his physicians. It is also safe to assume that the average pharmacist will not read all of these articles as he is naturally interested in some subjects more than in others. A voluntary movement of this kind cannot have the sustained effort of the paid detail forces of pharmaceutical manufacturers.

It must be realized that the pharmaceutical manufacturers have been at work detailing physicians incessantly over a long period of years. And this continual detailing has resulted in a terrific momentum being built up in the prescribing of ethical specialties. That this is the fact is evident from the organized plan to attempt to swing prescribing back to official preparations. The attempt to check this momentum must continue its efforts year in and year out. New ideas to retain the interest of the pharmacist and the physician must continually be developed. There can be no let up, for once this occurs the pharmaceutical

manufacturers will quickly regain much of the ground that they might have lost.

The task of supporting the Pharmacopoeia against the new specialties of the manufacturers is not going to be an easy one no matter how it is done. For the manufacturers of the country are the ones who are conducting research in medicine and giving to the physicians new and improved products that make the diagnosis, treatment, cure, and mitigation of disease easier, swifter, or more certain.

All the detailing by pharmacists and all the articles in the world are not going to prevent a physician from using a new specialty of a manufacturer which represents a distinct improvement over anything else in use. Furthermore, if the plan were successful to a marked degree, medicine would not progress as rapidly as it has in recent years for the reason that manufacturers would be unable to expend such large amounts of money upon research and development of new products. And such a condition would "freeze" the Pharmacopoeia for the reason that the Pharmacopoeia gets its new and improved products mainly from the developments of pharmaceutical manufacturers.

As a matter of cold fact the U.S.P. XI contains 569 monographs, of which seventy-one, or over twelve per cent. describe products which were first developed and introduced by commercial manufacturers. When it is considered that some of the 569 monographs in the U.S.P. describe no particular product, and that there is one of these monographs for each of the simple vegetable drugs and simple chemicals used in compounding prescriptions, it can be seen that this percentage is very high.

Drugs described in the U.S.P. XI and introduced into medicine by commercial manufacturers are:—Acetanilid–Antifebrin, Acetophenetidin–Phenacetin, Acetylsalicylic Acid–Aspirin, Acetyltannic Acid–Acetannin, Acriflavine and Acriflavine Hydrochloride-Trypaflavine, Wool Fat–Lanolin, Hydrous Wool Fat–Lanolin–Hydrous, Ethylhydrocupreine Hydrochloride–Optochin, Ethyl Aminobenzoate–Anesthesin, Ethyl Chaulmoograte–Chaumestrol, Ethylmorphine Hydrochloride–Dionin, Albumin Tannate–Tanalbin, Aminopyrine–Pyramidon, Antipyrine, Strong Protein Silver–Protargol, Mild Protein Silver–Argyrol, Barbital–Veronal, Soluble Barbital–Veronal Sodium, Bismuth Subgallate–Dermatol, Calcium Creosotate–Calcreose, Calcium Gluconate, Calcium Iodobenhenate–Sajodin, Cannabis, Carbromal–Adalin, Cascara Sagrada, Chlorobutanol–Chloretone, Creosote Carbonate–Creosotal, Emulsion of Cod Liver Oil, Emulsion of Liquid Petrolatum, Epinephrine, Eriodictyon, Diluted Erythrityl Tetranitrate–Tetranol, Eucaine Hydrochloride–Beta Eucaine, Extract of Cannabis, Extract of Cascara Sagrada, Fluidextract of Cannabis, Fluidextract of Cascara Sagrada, Aromatic Extract of Cascara Sagrada, Fluidextract of Eriodictyon, Homotropine Hydrobromide, Iodoform, Soluble Iodophthalein–Iodeikon, Saponated Solution of Cresol, Solution of Epinephrine Hydrochloride–Adrenalin, Solution of Posterior Pituitary, Merbaphen–Novasurol, Methenamine–Urtropin, Neocindophen–Novatophan, Iodized Oil–Lipiodol, Petrolatum–Vaseline, White Petrolatum–Vaseline, Liquid Petrolatum–Liquid Albolene, Phenacaine Hydrochloride–Holocaine, Phenobarbital–Luminol, Soluble Phenobarbital–Luminol Sodium, Phenyl Salicylate–Salol, Procaine Hydrochloride–Novacaine, Chiniofon–Yatren, Posterior Pituitary, Quinine Ethylcarbonate–Euquinine, Antimeningococcic Serum, Antipneumococcic Serum Type I, Stomach, Sulfomethylmethane–Trional, Theobromine with Sodium Salicylate–Diuretin, Theophylline–Theocin, Theophylline with Ethylene Diamine–Euphillin and Metaphillin, Theophylline with Sodium Acetate–Agurin, Thymol Iodide–Aristol, Thyroxin.

In addition to these products there are other items originally discovered by independent scientific workers, which products could never have been developed without the aid of the large commercial manufacturers. In this group of products are: Arsphenamine and Neoarsphenamine, Diphtheria Antitoxin, Scarlet Fever Antitoxin, Tetanus Antitoxin, Chloramine T, Dichloramine T, Chlorcosane, Ephedrine and its salts, Liver Extract, and solutions of liver, Solution of Irridated Ergosterol, Solution of Parathyroid, Tryparsamide, and bacterial vaccines from Typhoid Bacillus and with Paratyphoid Bacilli.

Iodine

(*Continued from page 184*)

It has been estimated that Chilean nitrate manufacturers can produce iodine for $.25 a pound, selling it for $.40 to $.60 a pound delivered, after paying all selling expenses, Association dues, and incidentals. Some put this figure even lower, believing it almost clear profit as a by-product. It was this very ease of production that caused the formation of a controlling agency, which could regulate production and sales and prevent too great accumulation of iodine stocks.

First organization of this kind was formed as early as 1878, later becoming a part of the Nitrate Producers' Association. When this organization disintegrated due to the pressure of synthetic nitrate on the nitrate industry, the work was carried on by the Chilean Iodine Producers' Association and large sums of money were expended in research to widen the field for its use. No attempt was made, however, to offer iodine to the world at a reduced price. Production was strictly limited to demand. Each nitrate producer participating in the production of iodine was given a quota and a percentage of the income of the association in proportion to his quota.

At the present time all control of the industry is in the hands of the Chilean Nitrate and Iodine Sales Corporation and the Iodine Educational Bureau, financed by the corporation, handles the propaganda work.

These very efforts on the part of Chilean producers to widen their market no doubt helped to destroy them.

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F.D.A. VS. F.T.C.

The fate of the proposed Food, Drug, and Cosmetic Act hangs upon whether or not the fight between the F.D.A. and the F.T.C. for advertising control can be settled.

While high hopes were held out regarding a new Food and Drugs Act, the situation at the present is anything but bright. First of all we were led to believe that Senator Copeland and Representative Chapman would draft a bill which they would both introduce into their respective branches of Congress. Instead of this, two different bills have been introduced varying in many important details. Further than this we were led to believe that some entirely new method of handling advertising would be contained in the bill to the end that the dispute existing in the industry, in Congress, and in the government departments as to who shall have jurisdiction over advertising would be completely eliminated. The dispute has not been eliminated and the Copeland Bill sets up dual control over advertising. The dual control is set up for the reason that the Food and Drug Administration is given power to regulate advertising in the public interest, while the Federal Trade Commission retains its power to regulate advertising in the interests of fair competition among manufacturers and importers.

The most important consideration in the success or failure of any new bill is the one question of which government department shall enforce the advertising provisions of the bill. However the probable effect upon the industry of whether the Food and Drug Administration or the Federal Trade Commission handles advertising provisions has been built up to a point far beyond its real importance. A considerable number of manufacturers in the industry will strenuously oppose any bill that does not give control to the Federal Trade Commission, although the original proposers of the Federal Trade Commission idea are perfectly willing to accept Food and Drug Administration supervision. The idea that the Food and Drug Administration must not have this control has now become all-important to a rather large number of manufacturers, splitting the industry to a marked degree upon any bill that is presented. The Federal Wholesale Druggists Association is strong for the F.T.C.; many individual members of the Proprietary Association feel the same way, as perhaps do the large majority of the members of the Institute of Medicine Manufacturers.

Quite aside from this division of opinion in the industry, there is the battle between the F. D. A. and the F. T. C. themselves. This is said to be very bitter. It may be difficult for the average layman to understand why government departments will become so excited over the question of which department is to be charged with enforcement of a law. But it must be understood that the only real recompense that a government official can get beside his fixed salary is more power and importance in the government. Therefore, the more laws a particular department has to enforce, and the more activities with which it is charged, the larger becomes its staff and the more power it possesses in government circles. It is most likely under such conditions that many of those already in the department in lower positions will be advanced sooner if new duties are given to the department, and it is also possible that the heads of the department might receive salary increases.

The feeling of those in the industry strongly in favor of the F. T. C., and the feeling of the F. T. C. itself have been reflected in Congress, particularly in the House of Representatives. Because the Senate adopted the Copeland Bill giving authority for advertising control to the F. D. A., those opposed to this provision turned their attention to the House of Representatives. And the F. T. C. lobbied in a most competent manner. Those in the industry opposed to the F. D. A. also did their share. Now the Congress is almost hopelessly split on this question and unless one or the other government departments can be made gracefully to bow out of the picture, the split is likely to continue.

The ridiculous part of the situation is that it would not matter to the industry which department was given control of advertising. The main thing would be to

have it only in one department and not in two as is provided in the latest Copeland Bill. With a fair definition of advertising, proper methods of enforcement such as injunction proceedings and no criminal penalties, the industry can take one or the other department.

Those who favor the F. T. C. say they do so mainly because the F. T. C. is composed of men who understand business and who are interested in aiding business rather than hindering it. However, anyone who has studied the development of the Federal Trade Commission knows that the Commission extended its activities under the various laws which it has been enforcing, until it was regulating business to a far greater extent than was originally conceived. The extension of the meaning of the Clayton Act to regulate advertising as a form of unfair competition was not considered originally. Now the Commission goes out of its way to pick on this industry particularly. The Commission has men who listen to most of the commercial plugs over the radio, read most of the magazines and newspapers of the country, and issue complaints one after another, many of them involving petty things which do no particular harm to a competitor and certainly do not injure or mulct the public.

Further than this, the Federal Trade Commission is a quasi-judicial body composed of lawyers with their staff of investigators and trial examiners. These people have no first hand information on drugs and cosmetics. The Commission has no laboratory or staff of chemists to check the statements made by manufacturers in their advertisements. It is equally difficult, if not more difficult to obtain specific information from them than it is to obtain similar information from the F.D.A. Members of the Commission can always fall back upon the fact that the Commission is composed of five members all of which must vote on any question brought before it.

When one considers the use of the multiple seizure threat by the F. D. A., one must remember that the F. T. C. has already, on more than one occasion, appeared to employ similar tactics to bring into line manufacturers, one of which the Commission could not defeat in court. This practice of the Commission seems to be to get the Federal Communications Commission to suspend the licenses of broadcasting stations that allow advertising statements to be made to which the Commission objects. It will be recalled that twenty-one broadcasting stations that allowed Marmola to be advertised from their studios either had their licenses suspended or were threatened with suspension of licenses if they did not discontinue Marmola advertising. This was in the face of the U. S. Supreme Court decision that the F. T. C. had no control over the advertising of Marmola. We know of another case of this type which occurred within the past year. This was the case of a penetrating salve. The manufacturer made certain statements in the newspapers and over the radio which statements were backed up by scientific proof which the manufacturer had in his possession. The Commission cited the manufacturer charging that these statements were false and therefore constituted unfair competition. The manufacturer denied the charge and asked for immediate trial. The Commission refused to follow through on the action and for six months or more did nothing even though the manufacturer repeatedly requested action so that he could have the case finished. Then all of a sudden, the broadcasting stations started getting in touch with the manufacturer telling him that they would have to discontinue his advertising because they had been threatened by the Federal Communications Commission with suspension of licenses if they continued to allow him to advertise.

If there is any difference between this and the use of multiple seizures in cases of misbranding, no one can tell what it is. There is the same principle involved in both procedures—that of calling an indicted man guilty before he is tried. And imagine how much further the F. T. C. might go in this direction since it is a quasi-judicial body, or both prosecutor and judge. Once the F. T. C. got the power to regulate advertising of this industry in the interests of the consumer, there is no telling how far it would go.

One thing that probably frightens many manufacturers is the thought that if the F. D. A. had control of advertising, officials would in some way use multiple seizures of the product to force their views on advertising. It has been said that this practice was employed in the F. D. A. when Dr. Durrett was drug control chief even though the Department at that time did not have control of advertising. This is said to have been in the case of Vicks Vaporub. During a flu epidemic, Vicks advertised heavily in cities where the epidemic was raging. Dr. Durrett would not permit Vicks to use a flu statement on the label, but really had no control over the advertising. Carloads of the product were seized to try to make Vicks change their advertising.

This clearly indicates that the multiple seizure provision of the act is all-important. And while it illustrates what can take place under a drastic official, such as Dr. Durrett was at that time, it must be remembered that the entire industry including the most ethical pharmaceutical manufacturers, were getting real rough treatment from the department at that time. Such a condition could just as easily take place in the Federal Trade Commission, particularly in view of the type of cooperation which the F. T. C. has evidently been able to obtain from the Federal Communications Commission.

Instead of battling over which department should regulate advertising, the industry should unite in an effort to have the bill properly written to the end that whichever department gets control, it cannot go too far. For this reason the entire force of the industry should be directed to secure freedom from multiple seizures except in case of products which are dangerous to health. This force should be further directed to secure a definition of advertising for the purposes of the bill which will not allow the enforcement officials to pick on advertise-

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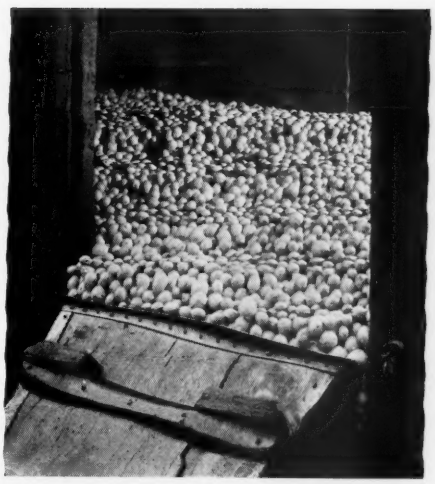
CITRUS OILS

THREE weeks of unprecedented frost in the California citrus fruit belt has centered attention of citrus oil dealers and consumers on these materials. Black "smudge" clouds rolled up from the blackened orchards of southern California and when the smoke cleared it was estimated that the cold weather had cut in half the value of the entire crop. From reports of agricultural commissioners throughout the citrus belt, it was estimated that the following destruction had been done:

Damage to citrus crops...	$35,000,000
Damage to citrus trees....	5,000,000
Cost to twelve days' "smudging".....	6,000,000

It was said that the total estimate of $46,000,000 lost was conservative.



Above are shown lemons in the freight car ready to be unloaded at the by-product plant in California for recovery of lemon oil and citric acid. Below, the picking of lemons in Italy.

The exact effect this situation will have on the supply of the citrus oils is not as yet definitely known. More frozen oranges this year will be subjected to by-product extraction because such fruit is unsalable to the general public. Frost does not necessarily impair the orange oil, therefore there will be more orange oil this year than last, it is generally believed. To what extent this will be true will depend largely on how large a percentage of the frozen oranges was mature fruit. The orange crop ripens over a period of several weeks. Only the ripe fruit can be used for oil. Unripe frozen fruit will represent a total loss.

The lemon oil prospects are causing more real concern than is being felt for orange oil. California and Italy are the only countries producing lemon oil in commercial quantities. Orange oil, on the other hand, is produced not only in California but in Florida, Italy, Africa, the West Indies, Spain, and Porto Rico. When one of the two producing centers for lemon oil are adversely affected the situation immediately becomes serious.

It is reported that the heavy cold spell in California has killed most of the lemon tree buds. Hence, there will be less lemon oil available this year. The crop that is usually subjected to oil extraction matures some time in July. This crop will be unavailable this season and lemon oil should therefore be much higher in price.

The situation in lemon oil had been serious before the present California trouble. California has, during the past twelve months, experienced an abnormal

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COUNTERIRRITANTS

By A. RICHARD BLISS, Jr., Ph.D., M.D., LL.D.

PHOTOS EWING GALLOWAY

FEBRUARY and March are probably the months during which counterirritants are most used, because of certain so-called "winter seasonal diseases"—the "common cold," "flu," bronchitis, pneumonia, etc. Counterirritants are agents which, by irritation of the skin, may relieve inflammation in deeper lying structures, allay pain, probably diminish congestion, and possibly result in a more prompt termination of the condition. The use of counterirritants is very ancient; the Ebers Papyrus (about 1552 B. C.) gives the formula for a poultice which calls for thirty-five ingredients, proving incidentally, too, that "polypharmacy" was practiced ages before some references suggest.

In spite of the fact that the counterirritants have been scoffed at by many medical practitioners, counterirritation continues to hold an important place in modern therapeutics. Several generations ago it was thought that the dilation of the skin vessels produced by counterirritants served to draw the blood out of the neighboring blood vessels, and thus depleted the congested area. With increasing knowledge of the physiology of the circulatory apparatus, this crude mechanical conception of counterirritation was abandoned. However, "action at a distance" may be easily demonstrated. Thus, heat applied to one hand dilates the blood vessels of both hands, and cold contracts them. Scientific evidence today shows that the effects of counterirritants are due mainly to nervous reflexes, which are partly sensory and partly vascular. As long ago as 1887, Dana called attention to "referred pains" as being due to the distribution of the nerves, and Head in 1893 and Mackenzie in 1902 demonstrated that tenderness of areas of the skin might be a manifestation of injury or inflammation of one of the internal organs. Recent anatomical and physiological investigations have shown that pain is elicited only in structures which are supplied by the cerebrospinal nervous system, and that viscera supplied by sympathetic nerves have no proper pain sense. The apparent pain in inflamed viscera is thus due to a reflex effect through cerebrospinal nerves. To illustrate; in appendicitis, pulmonary tuberculosis, etc., certain skin areas may be so tender as to almost preclude examination.

In a fashion, then, the sensory vasomotor reflexes elicited by counterirritants are a reversal of the "referred pain" which occurs in definite skin areas when the corresponding viscera are irritated, and this explains the old empirical observation that counterirritation is most effective when applied to a definite area for each internal inflammation. In this way may be explained the expulsion of gas from the intestines following a turpentine stupe applied to the abdomen, although the intestines have no direct anatomical connection with the anterior abdominal wall; also the effect of a mustard foot bath in pelvic congestion, and of a mustard plaster

or poultice on the chest in pneumonia or pleurisy. Manufacturers of counterirritant preparations might well include in their packages, as a potential aid to the purchaser, a simple diagram of the human body showing the most important areas to which counterirritants are usually applied.

Two other factors which explain in part the relief often afforded by counterirritants are: (1) the well known fact that pain in a sensitive, superficial area usually results in the diversion of the attention of the sufferer from the disease pain to the more bearable sensations produced by the counterirritant; and (2) the possible psychic suggestive effect of the remedy. Rubbing the back will, at times, distinctly affect the viscera, and this suggests a reason for the "success," in some cases, of the osteopathic plan of "manipulating" the spine and the adjacent areas.

In studying potential formulas for counterirritant preparations, the several degrees of skin irritation which agents of this group may produce should be given careful consideration; viz., (1) *rubefaction* or reddening, the first degree; agents which produce it are called *rubefacients;* (2) *vesication* or visicle-production; agents which produce this second degree are called *vesicants;* and (3) *blister-production*, which frequently follows vesication due to the coalescing of the vesicles to form large blisters; agents which cause blistering are called *epispastics*. Blistering is not very commonly employed today, for not only is the blister a painful lesion which demands treatment itself, but it prevents for the time being any further applications to that area of the skin. Manufacturers of counterirritant preparations which contain potential blistering ingredients, such as mustard or its volatile oil, should keep in mind, when compiling directions for using, that blistering not infrequently unintentionally results from failure to remove the application soon enough. It should be remembered, too, that in brunets an area of blistering may be followed by permanent pigmentation.

Heat and cold are included among the counterirritant measures, and the hot water bottle, electric pads, electric lamps, icebags, coils, stupes, and simple hot poultices, such as the "old fashioned" bread poultice, flaxseed poultice, and clay poultices, are the more common and convenient vehicles for the application of these two physical measures.

The more important counterirritant drugs include: camphor, menthol, chloral hydrate, alcohol, chloroform, oil of turpentine and other volatile oils, methyl salicylate and capsicum, all of which are rubefacients; and

ammonia, iodine, mustard, and cantharides, which are potential epispastics and will blister if used in too great concentrations or if applied to the skin over too long periods.

Counterirritants are employed mainly in the following conditions: (1) To relieve muscular, neuralgic and rheumatic pains, as well as those associated with visceral conditions; for example, dysmenorrhea, pleurisy, cardiac pain, biliary and intestinal colic. (oil of turpentine, chloroform, capsicum); (2) To promote sweating. (alcohol, heat, etc.); (3) To relieve congestion and inflammation, as in pneumonia, pelvic congestion, and inflamed lymph nodes. (mustard, cantharides); (4) To promote absorption, as of serous effusions in the pleural or peritoneal cavities or joints, in hydrocele, and in bruises. (iodine, mustard, heat); (5) To relieve cerebral congestion, as the ice-bag in headache, delirium, meningitis, etc., or the "menthol pencil" in headache; (6) To overcome collapse, as in the use of the mustard bath or alternating hot and cold plunges in infants; ammonia inhalations in fainting; (7) To overcome tympanities, as in the use of a turpentine stupe in typhoid fever or postoperative intestinal paralysis. Irritants of all kinds should be used with great caution in old age and debility, due to the fact that they are prone to be depressing in such patients.

The formulas which follow are illustrative of the more common types of counterirritant preparations.

Turpentine Ointment

Oil of turpentine	12.5 parts
Methyl salicylate	12.5 "
Lanum	37.5 "
Benzoinated lard	37.5 "

Mentholated Salve

Menthol	2.0 parts
Camphor	4.0 "
Methyl salicylate	⅛ part
Oil of eucalyptus	⅛ "
Pine oil	⅛ "
Boric acid	5 parts
White wax	2.0 "
White petrolatum, to make	100.0 "

A Mutton Suet Salve

Menthol	2.5 parts
Camphor	4.0 "
Thymol	0.5 "
Oil of turpentine	8.0 "
Methyl salicylate	12.0 "
White wax	4.0 "
Mutton suet	50.0 "
White petrolatum, to make	100.0 "

Analgesic Balm No. 1

Menthol	15 parts
Methyl salicylate	15 "
Distilled water	15 "
Yellow wax	10 "
Anhydrous lanolin, to make	100 "

Analgesic Balm No. 2

Menthol	6 parts
Methyl salicylate	12 "
White petrolatum	30 "
Lanolin, to make	100 "

Stainless Salve

Menthol	3 parts
Camphor	4 "
Oil of myristica	1-5 part
Oil of thyme	1-3 "
Oil of eucalyptus	2-5 "
Oil of cedar leaf	2-5 "
Oil of turpentine	7½ "
White petrolatum, to make	100 parts

Migraine Salve

Menthol	15 parts
Methyl salicylate	16 "
Oil of rosemary	2 "
Yellow wax	10 "
Anhydrous lanolin	46 "
Water	180 "

Mustard Salve

Oil of mustard	1 part
Camphor	5 parts
Ethyl aminobenzoate	2 "
Distilled water	20 "
Yellow petrolatum	27 "
Anhydrous lanolin, to make	100 "

"Chest Salve"

Oil of turpentine	½ part
Oil of Cassia	⅛ "
Oil of eucalyptus	2 parts
Menthol	½ part
Paraffin	1 "
Petrolatum, to make	16 parts

Pine Salve

Oil of pine needles	4 parts
Oil of turpentine	3 "
Camphor	2 "
Menthol	2 "
Lanolin	20 "
Petrolatum, to make	100 "

Menthol Pencil

Menthol	100 parts
Benzoic acid	10 "
Eucalyptol	3 "

Melt together and pour into molds.

Guaiacol Liniment

Methyl salicylate	10.0 parts
Menthol	2.5 "
Guaiacol	6.5 "
Soft soap liniment, to make	100.0 parts

An Oily Liniment

Methyl salicylate	20 "
Camphor	15 "
Cottonseed oil, to make	100 "

Capsicum Liniment

Oleoresin of capsicum	¼ part
Methyl salicylate	20 "
Soft soap liniment	20 "
Lanolin, to make	100 "

Thompson Liniment

Menthol	½ part
Camphor	½ "
Oil of turpentine	½ "
Oil of eucalyptus	½ "
Chloroform	1 "
Tincture of capsicum	1 "
Methyl salicylate	1 "
Liquid petrolatum	1 "

"Hot" Liniment

Oil of mustard	4 parts
Chloroform	4 "
Ether	16 "
Alcohol, to make	100 "

"Rub-Down"

Methyl salicylate	1.5 parts
Tincture of arnica	10.0 "
Witch hazel	30.0 "
Alcohol	40.0 "
Water, to make	100.0 "

Burnett's Liniment

Oil of sassafras	3 parts
Oil of hemlock	3 "
Oil of red cedar	3 "
Oil of turpentine	3 "
Camphor	3 "
Capsicum	3 "
Alcohol, to make	100 "

Acetone Liniment

Menthol	1.5 parts
Oil of peppermint	0.5 "
Oil of spearmint	2.0 "
Oil of wormwood	1.0 "
Chlorophyl, a sufficient quantity	
Water	12.0 parts
Acetone, to make	150.0 "

A "Penetrating" Liniment

Oleoresin of capsicum	0.75 part
Oil of camphor	5.00 parts
Oil of sassafras	2.50 "
Oil of cajuput	2.50 "
Chloroform	5.00 "
Coal oil	60.00 "
Oil of turpentine, to make	100.00 "

Veterinary Fly Blister

Cantharides	1 part
Ether	1 "
Alcohol	8 parts
Oil of origanum	½ part

Macerate the cantharides with the ether for 24 hours; then add the other ingredients and continue maceration for 8 days; finally filter.

The Cosmetic Tax

(Continued from page 185)

Manufacturers of goods nationally advertised find that in addition to advances in cost of raw materials, packaging materials, and labor, they must also face an advance in the cost of advertising. Circulations of advertising media are increasing and that means higher rates for advertising. In addition, publishers are also actually experiencing higher costs in printing, paper and other items which make up their costs.

The discriminatory character of the tax is illustrated in two ways. First the cosmetic industry is discriminated against because the similar tax upon jewelry has been removed entirely, and because a similar tax upon furs has been reduced from ten per cent. to three per cent. Taxes upon jewelry, furs, and cosmetics were enacted at the same time at the same rate. Yet one of these other taxes was removed entirely, and the other was greatly modified. And it must be considered that jewelry and furs are far greater luxuries than cosmetics.

The tax is also discriminatory within the industry in that it penalizes the manufacturer who makes his own products. The manufacturer who buys his cosmetics in bulk from another, pays to his supplier ten per cent. of the amount of his bill. He pays no tax himself and is thereby relieved of the burden of paying ten per cent. on the cost of his packages, labels, filling operations, packaging and shipping, advertising, sales expense, and profit—if there is any. Many manufacturers sought to equalize this situation by setting up separate corporations for manufacturing and sales only to find that the government would not allow any such equalization. Some manufacturers who paid their taxes upon this basis now find they will be faced with paying large amounts of back taxes extending back to 1932 when the tax was enacted. Many manufacturers have paid the additional assessment, but others are unable to do so and are faced with bankruptcy if the government insists upon payment all at one time.

Because of the industry being faced with advanced prices or lessened quantities, and because of the industry also being faced with bankruptcies if back taxes are demanded, it behooves suppliers to the industry as well as actual manufacturers to become active in a strong organized attempt to have the tax removed. With proper organization extending from the suppliers to the industry, through the manufacturers to wholesalers and retailers, and finally to the great mass of consumers and women's clubs, a number of letters could be sent to the legislators in Washington that would send these legislators scurrying to cover. This is the most effective way to bring about removal of this tax.

THE COSMETICS OF PAPER PACKAGING

Some interesting developments in depression years in carton possibilities are explained in this article.

THE containers in which you present your jars and bottles of cosmetics to the public may have the same complexion difficulties as do the women who read your advertisements and rush to use your product.

Are there lines of age in the sides of your skin-food boxes? Does the ink mottle or crack on the surface of your lotion packages? Or the lovely silver printing flake off bit by bit from the cartons containing your dandruff remedy? Are your smartest over-all varnish impressions dirty and dingy, looking like a woman whose complexion is spoiled by an ill-chosen finishing powder?

If you are experiencing any of these troubles to a major or even to a minor degree, correct use of the new coated folding boxboards will help you to bring a stimulating youthful glow to the face of your whole line.

During the depression, some striking developments were brought into the paper coating industry, and the coated boxboards benefited especially thereby.

At any time, it would have seemed well-nigh miraculous for these paper manufacturers to replace a one-cent-a-pound pigment by a sixteen-cents-a-pound pigment. They did it, though, during the depression, and the producers of the new expensive pigment confess they are still a little dazed by its widespread adoption throughout the coating trade during a time of economic distress! The result—a degree of coating whiteness hitherto unknown, to make colored inks sparkle with contrast. Along with that, the paper coaters developed new degrees of high finish, new water-and-light-resistant colors. But most important of all, they created coated boxboards that provide the manufacturer of folding cartons with a printing surface hitherto unobtainable except on the finest light-weight coated book-stock. These new surfaces were quietly presented to the trade without fanfare or flourish.

There are new coated surfaces which will hold up overprint and spirit varnishes and lacquers. These

By R. M. COBB*

varnish-resistant coatings come in white and colors and will hold up the glossy finishes when these finishes are applied all over the carton, both over ink and over plain coating. Such varnish-impermeable surfaces will also give an added brilliance and levelness, of course, to spot varnishing over ink alone. And take the new high-gloss inks, and make them gloss, and gloss, and gloss.

The ink manufacturers have cooperated in this development by making varnishes which will not even care to penetrate these varnish-resistant coatings. The new varnishes and paper lacquers give a distinctive, finger-mark-free surface as a finishing touch to the most aristocratic drug and cosmetic packages.

There are new coated surfaces that will take opaque deep solid colors, such as black and deep reds, with a uniformity and brilliance never shown before on boxboard prints. The same surfaces take exceptionally brilliant halftones. There are contrasting types of coated surfaces designed to take delicate tints without a sign of mottling.

Silver and gold inks, long the bug-a-boo of printers, and the double bug-a-boo (or bug-bug-a-boo-boo) of lithographers, have been brought to a new state of usability by ink manufacturers. And for these improved silver and gold inks, there are new coated surfaces which receive the metallic ink impressions eagerly, hold them tightly, and encourage the resulting metallic printing to greet the eye with an arresting lustre.

By proper use of the new coated printing surfaces, a box with a luxury-class appeal may be created on moderately priced folding box stock. For with proper use of the coated surfaces, every ink laid down adds to the attractiveness of the finished carton.

Research by boxboard coaters has developed the knowledge of the surface requirements of each type of ink to such a point that each coating may be tailored to your ink requirements. *The flexibility of the coating process is such that almost the smallest order may be coated with a surface specially designed to bring out the best in the subsequent printing.*

With the development of consumer consciousness in the coated boxboard industry, the realization has come that the universal printing surface is almost as unknown or unsuccessful as the universal cosmetic! Cosmetic manufacturers have separated all Womankind into two categories, dry skin and oily skin. It is not quite true that never the twain shall meet. The twain still may meet in the tooth paste and tooth powder field; but for almost every other cosmetic urge women have been taught that their requirements diverge widely, and that the cosmetic manufacturer stands ready to provide for them.

To get the most out of your beauty preparations, each of your customers must know her own type and requirements, or must ask your representative to type her if she is not quite sure of herself.

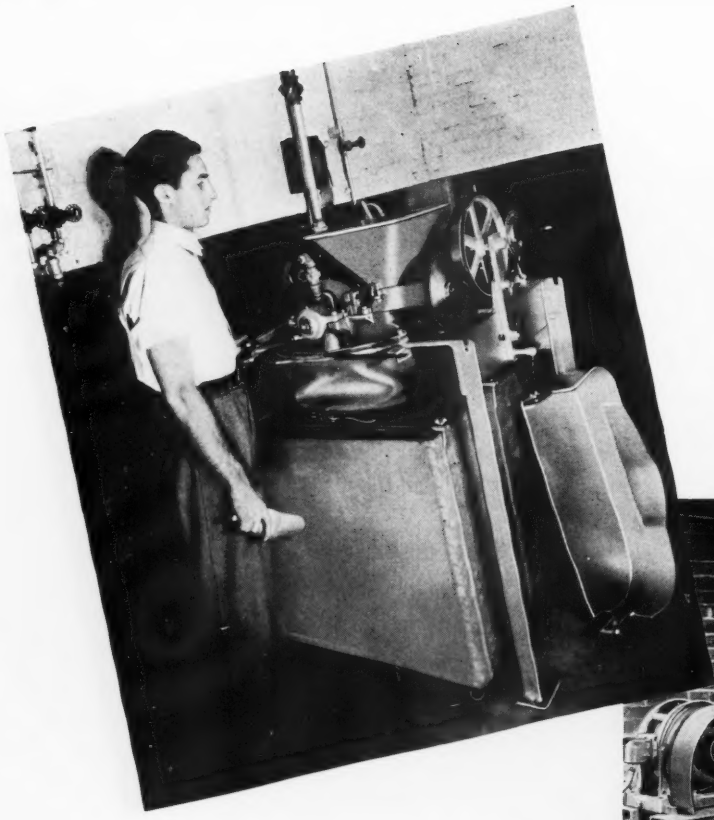
Similarly, you must type your printing surface requirements. To do so, we may consider printing ink as the final touch of make-up, applied to a surface which corresponds to the skin or complexion of your carton. Then if you are to use an ink that calls for an absorbent surface, eager to receive a lot of oily vehicle, paper manufacturers can present a coated boxboard complexion—dry, porous, and eager for oil.

If, on the other hand, you want to finish the face of your carton with an ink that must lie smoothly, levelly, brilliantly on the surface, the coaters will present a hard, level, impervious coated skin into which the ink will not penetrate.

Whether you shall select an absorbent or non-absorbent surface skin for your cartons is not a matter of choice, but of necessity, and the ink represents the necessity. Each ink at present requires a certain degree of absorptiveness or non-absorptiveness in the surface on which it is printed. So that when a carton design calls for inks that present absolutely opposing surface requirements, terrible things may happen and they usually do.

(*Continued on page 201*)

*Research Chemist, Lowe Paper Company, Ridgefield, N. J.



Here are shown two views of the Mikro-Pulverizer. While on the opposite page are shown a machine used for grinding and blending tooth powder, and a Day Roller Mill.

It has always been a matter of surprise to us that more scientific study has not yet been given to the problem of grinding. We all know how important it is; we realize that the size and uniformity of drug particles directly affects the rate of flow in extraction and even has an influence on yields. But most grinding problems are still solved by empirical methods. One grinding room foreman achieves a given result by using a certain combination of cutters and screens; another accomplishes the same result with an entirely different machine. The machines determine the methods.

It may be of help therefore to point out that the common fault of drug grinding is its random character. A ten mesh percolator grind will contain upon analysis anywhere from ten to thirty per cent. of fines that will pass eighty. A condition like this is understandable when it is caused by differences in the friability of the drug. But when it occurs in the same drug due to different grinding methods and equipment something is obviously wrong. Yet this is what frequently happens.

In extraction by percolation or by any other method, the percentage of fines will affect, not only the rate of flow of the percolate, as we have indicated above, but it also has an influence on the recovery of the solvent. The more fines there are in a given charge the greater will be the amount of solvent retained by the drug with consequently longer drying time with concomitant increase in steam consumption and condenser water.

We grind many drugs to a certain mesh simply because experience has shown us that we cannot grind any finer because the increased proportion of fines will restrict percolation or stop it altogether. This does not mean that finer drug will not percolate; it will, indeed, percolate provided the extreme fines are minimized. If by selective sifting we were to remove all particles not within ten per cent. of a given mesh, we should immediately find that many drugs which ordinarily are percolated at ten mesh could be percolated easily if all the particles were uniformly in the neighborhood of twenty or twenty-five mesh. Obviously it would be uneconomical to attempt selective sifting as a means of securing such uniformity. The thing to do is to strive

GRINDING DRUGS

By FRANCIS CHILSON

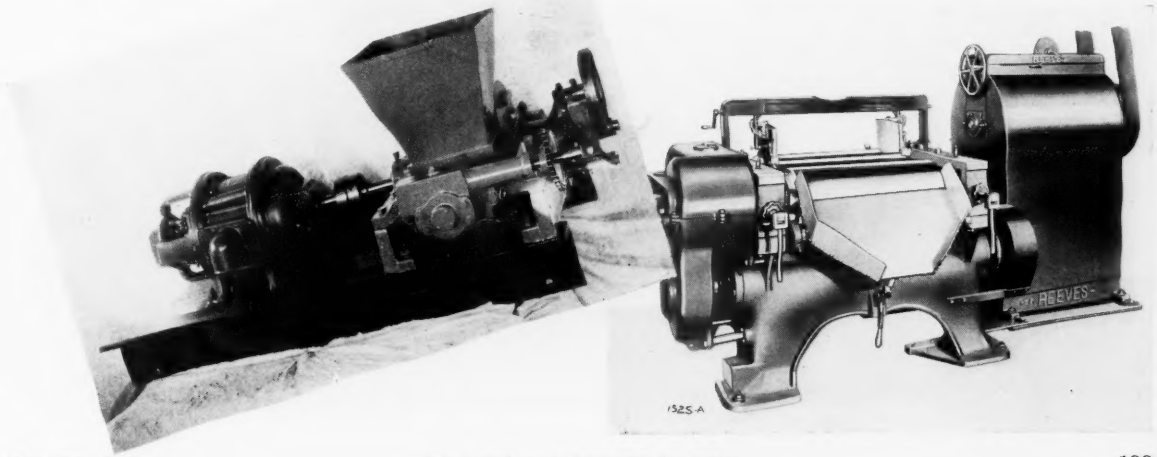
to achieve maximum uniformity through the use of proper equipment.

Let us not in this endeavor hamstring ourselves by failing to eliminate at the beginning the uncontrollable factors—clay and pollen. If for instance a particular drug contains at the beginning three per cent. of clay and dirt and three or four per cent. of pollen that will pass eighty mesh, absolute uniformity in grinding will certainly not reduce this percentage. Hence, if it isn't economical to clean the drug beforehand, we must allow for the dirt factor in checking our final results.

We feel, however, that a good deal more attention might be given the question of cleaning drug before use. It is not of record that clay and dirt ever produced any alkaloids. But to satisfy accountants and purchasing departments and to keep the records straight it is the natural desire of the grinding department to keep the dust loss factor down and to deliver to the extraction department the greatest possible number of pounds of ground drug. To do the job properly would require running the drug through a picker and cleaner, following which operation it would have to be weighed again. From this point on any loss could properly be considered a true drug dust loss. It becomes apparent that the more uniformly we are able to grind, the smaller will be our loss due to drug dust. Whether the drug is normally cleaned or not, it should be cleaned before investigation of grinding methods to eliminate the dirt variables from our final mesh analyses.

With the foregoing as a preliminary we wish to say straight out that drug can be ground to a degree of uniformity that few of us suspect. There are precedents for it. In our own work we have succeeded in producing an uncommon degree of uniformity with an extremely friable drug.

In a discussion of pulverizing in Production Forum recently we mentioned the fact that particles tend to pulverize themselves under certain conditions—the conditions being velocity, degree of confinement and uniformity of feed. Bring these factors under control and you can produce an amazing degree of uniformity. It sounds simple, but when you try to do it, you promptly find that the design of the grinding equipment prevents you from bringing all factors under control. It then becomes something of a problem to find equipment so designed that all necessary factors can be



ABBE ROTARY CUTTER

controlled. This isn't so easy as we know from experience. But it has been done.

It is because of the lack of grinding equipment the design features of which permit the variation of conditions to suit the characteristics of different drugs, that we find in grinding departments so many different types of grinding equipment. We find hammer mills and cutters and various kinds of plate grinders and attrition mills. Each of these does an acceptable job on particular drugs; none of them is suitable for all drugs.

Of the conditions mentioned above confinement is probably the most important. The equipment must be so designed that when particles reach the proper size they will be instantaneously released from confinement in the grinding chamber. If they are retained for a fraction of an instant after they have reached proper size, the attrition of the moving particles upon each other will reduce their size still further, thus producing undesirable fines. The drier and more friable the drug the more quickly will it pulverize beyond the desired mesh. Having proper screens has only a limited effect in accomplishing this result. Centrifugal force and other factors will carry a part of the ground material across the screen surface and around the grinding chamber again. This is attested by the fact that, given velocity enough, many drugs will pulverize down to sixty and lower even though the screen may have perforations as large as quarter inch.

There are a number of other factors that affect grinding—so many in fact that a book could easily be written on the subject—moisture content being one of them. The more moisture a drug contains the greater will be its resistance to pulverization and the more easily can it be ground to a uniform mesh. This fact is taken advantage of in the tobacco industry, where in order to produce the grind known as cube cut, which contains virtually no fines at all, the dry tobacco is humidified or even wetted thoroughly before grinding. The wetted leaves are passed through a cutter at a uniform rate and then promptly dried. Many drugs which are being prepared for immediate percolation can be handled in this way, because in the normal course they would be wetted before packing anyway. In other instances it is not possible to do this. Depending upon the nature of and the purpose to which the ground drug is to be put, a substantially similar result can be achieved by means of an oil spray.

But when it is neither economical nor desirable to treat the crude drug beforehand, it is still possible to achieve a uniform grind by means of the saw tooth cutter shown in the adjacent illustration. This machine consists of two parallel shafts upon which saw-tooth cutters are mounted at intervals, these being adjustable for various meshes. The whole cutting unit is mounted within a revolving, vibrating screen cylinder, having suitable mesh. Material is fed through the end of the cylinder and is carried across the rapidly revolving cutting knives, which rotate toward each other. The cut material drops down into the revolving cylindrical screen, through which it passes into the collection bin. The movement of the screen facilitates the passage of the properly sized material and it brings the oversized particles back above the cutters again. When particularly difficult material is to be ground a blast of air may be passed through the screen also. Thus, in this machine the rate of feed may be controlled; confinement of the cut material is virtually eliminated and hence is the pulverization of the cut particles by themselves avoided.

Roll granulators such as are used for the production of granulated coffee and cut cereals can be usefully employed in grinding drugs, especially bark, roots, seeds and large leaves and stems. These consist of three pairs of rolls mounted vertically. The rolls are provided with a cutting surface and revolve toward each other. The distance between the rolls may be adjusted, the top pair having a wider opening so that a gradual reduction is effected. The machines are very expensive and rather difficult to clean. They may be used for large runs.

Rotary knife cutters of the standard type are extremely useful and more generally applicable than one imagines. By changing the speed of the knives, by varying screen sizes, or by eliminating them altogether, by changing the pitch of the knives, by altering the direction of rotation and by utilizing air to keep the screen clear and the cut material removed, a surprising variety of results can be obtained and a considerable degree of uniformity achieved.

It may be well to mention here that it is often undesirable to attempt to produce in one pass a uniform product. In using cutters, pulverizers, cage mills and other relatively high speed grinders, it is frequently desirable to use very coarse screens or none at all and to set the equipment up in a manner that will permit an

interim screening operation. This is often done by mounting the equipment above a vibrating screen, which separates the coarse material from the fine, the former being returned to the grinder for further reduction.

We also wish to emphasize most strongly the necessity for uniform feeding. A slow, steady feeding of uniform quantities will produce a degree of uniformity in the final product that cannot possibly be achieved by alternately starving and choking the mill as is the custom generally. Hand feeding produces the latter result inevitably; it is best to employ mechanical feeders with which most grinding equipment can be equipped.

Cage mills, hammer mills, impact mills attrition mills are all more adaptable than is generally supposed. Take the hammer mill for example. The shaft of a hammer mill normally is equipped with a series of blunt hammers mounted along it at intervals. A different result can be achieved by changing the spacing of the hammers. A sharper cutting action can be obtained by substituting sharpened knives for the blunt hammers. The hammers can be removed and a swinging yoke may be mounted on the shaft to give a shearing action. The face of the yoke can be curved or cut at an angle to give a freer, sharper cut.

Since hammer mills run clock-wise, the material is carried all around the grinding chamber, and in some cases, past several breaker bars or grids before it can be discharged through the bottom screens. The pulverizing effect of this action on friable materials can be visualized at once. By reversing the direction of travel, the distance the material has to travel between the feed point and the release point is shortened tremendously and the attrition of the ground particles is reduced to a minimum. When a vacuum collector is employed or a blast of air is forced through the screens the danger of excessive attrition is further reduced.

This paper is already much too long and we haven't mentioned half the machines we'd like to discuss, but before closing we like to mention briefly the grinding of sticky materials, which are the bane of every grinding department. Here a cutting action is better than a beating action. The employment of sharp knives at high speed with extremely coarse screens or none at all will be very helpful. Confinement is the danger here too. Confinement causes friction; friction produces heat; heat produces stickiness; stickiness causes cursing. Therefore keep plenty of air going through the mill. Be sure that the material can get away once it is cut, *i. e.*, avoid confinement, and in extreme cases don't try to make the reduction in a single pass. It is better to screen after each pass until the desired result is achieved than it is to try to do the job in one pass. Once a mill gets gummed up it usually takes longer to clean it than it does to make two or three passes, sifting between each.

Cosmetics of Paper Packaging

(*Continued from page 197*)

Every carton has a keynote requirement. Must your carton have a light blue print? Then a surface designed to bring out all the attractiveness of that blue ink should be considered the keynote requirement, and the other inks selected should be those that will print well on the same type of surface the blue requires. Or, an opposite case, is the carton to be varnished or lacquered overall, over prints and over bare coating, also? Then the coated surface *must* be varnish-resistant, and all the inks chosen to go under the varnish should print well on a non-absorbent coating.

Just as cosmetic manufacturers, conscious of their customers' needs, supply a variety of products to cover these needs, so the coated boxboard manufacturer can supply a variety of coatings to meet the diverse requirements of the carton manufacturer.

By understanding the possibilities and the limitations of these standard coatings and their special modifications, the carton maker can secure luxurious effects in one, two, or more colors of inks.

If not aware of these new developments in coated surfaces, nor of how much more consumer conscious paper coaters are now than they have ever been before, it may surprise you to learn what unusual effects you may secure by close cooperation with the manufacturers of coated boxboard.

When in doubt about the kind of surface required by a special design, proofs pulled from simple plates using the inks to be employed will tell you quickly and easily which surface to order. And when full advantage is taken of this opportunity for cooperation, paper coater, carton maker, and drug or cosmetic manufacturer may all take pride in the finished carton; a simply spiffy carton which advertises "quality within!" at the point of sale.

F.D.A. vs. F.T.C.

(*Continued from page 190*)

ments from the point of insignificant details which cannot possibly be construed as dangerous to health or deceptive to the public. Further this force should be directed to writing into the bill procedure for enforcement of the advertising provisions so as not unduly to hinder a manufacturer or make him subject to criminal penalties. The method contained in the latest Copeland Bill of the department suing for an injunction seems to be the proper procedure.

If manufacturers will concentrate their efforts along these lines, they can forget all about which department is charged with enforcement of the advertising provisions of the act. And manufacturers should work in this direction for the reason that no matter what department is charged with advertising control, the definition of advertising, the methods of enforcement, and the penalties provided are the things that will really matter.

TESTED FORMULAS

By JOSEPH KALISH

THE young skin is said to differ from the older skin, and the normal from the dry skin, in that lower layers contain larger proportions of complex fats, oils, and water. These materials serve to keep the skin in a soft, flexible condition and their absence, or presence in insufficient quantity, results in the below-par conditions associated with excessively dry or aging skin. A preparation that will replenish the natural oil supply of the skin will therefore act as a corrective, and lubricating creams should be formulated with this end in view.

Absorption *through* the skin can be disputed only by those who have not adequately studied the subject, since overwhelming evidence has accumulated to show the presence, within the body, of substances applied only to the unbroken skin. Absorption *into* the skin is relatively more important in the case of lubricating creams and this type of absorption has long been an undisputed fact. Roughly speaking, mineral materials are absorbed little if at all by the skin while vegetable or animal materials are definitely absorbed. Synthetic substances similar in chemical composition to natural fats and oils act just like the natural products. As a consequence, a cream consisting primarily of animal or vegetable materials can be rubbed into the skin completely; one containing substantial amounts of paraffin, petrolatum, mineral oil, etc. will leave an external, lustrous deposit on the skin.

At first glance, evidence would seem to support the formulation of a completely absorbable cream, with all components passing into the skin. Unfortunately, few materials are completely absorbed without some residue which produces a sticky skin surface. This must be overcome before the application of make-up, and a cleansing treatment is generally indicated. Ordinarily, however, a certain amount of mineral oil is included in the cream formula; this is not absorbed and, when removed with cleansing tissue, leaves the skin surface clean and smooth.

As regards the consistency of the product, hard, medium, or soft creams can be made, depending upon the prevailing fashion. Massage necessary for the application of a hard cream is advantageous in facilitating absorption, but the cream should not be too hard to spread readily.

An emulsified preparation containing water is generally better in appearance, and seems to be better absorbed, than one not containing water.

The most important ingredient in a lubricating cream is the emollient—the penetrating, lubricating substance. Vegetable oils may be used interchangeably as long as they possess a certain group of properties in common. Acid number must be low, to minimize the possibility of irritation from free liquid fatty acids; iodine number should be relatively low, below 100, so that the oil will not become gummy when acted upon by air; odor should be at a minimum and the oil should not be too viscous. The color of the oil will affect the color of the finished product and should be limited accordingly. A group of ethyl fatty acid esters, recently made available commercially, offer interesting possibilities. These are light colored or colorless oils of very low viscosity. They are absorbed with extreme rapidity when applied to the skin; their odor is slight, depending upon the fatty acid or mixture from which they are made. Nothing is known yet about their tendency to become rancid and chemically they seem to be ideally compatible with the skin.

Lard oil and lard, and similar animal products, except for the readiness with which they become rancid, are well suited for incorporation in lubricating creams. Hydrogenated vegetable oils, the vegetable shortening and cooking fats manufactured for household use, deserve the utmost consideration in cosmetics. They are white, lustrous, creamy products with little odor and will keep indefinitely. As a matter of fact, we made a cream in all ways equal to many of those being sold merely by mixing a suitable perfume into vegetable shortening at room temperature. The price is low.

Cocoa butter has a deservedly high reputation in creams. It is bland, readily absorbed, and light in

LUBRICATING CREAMS

Our tested formulas this month are of lubricating creams. Next month we shall present another set of formulas.

No. 1

Beeswax	9.0
Paraffin	8.0
Cetyl alcohol	1.0
Hydrogenated oil	5.0
Lanolin	5.0
Mineral oil	16.0
Vegetable oil	15.0
Borax	0.6
Water	40.4

White cream, medium consistency, very slight graininess.

No. 2

Glyceryl monostearate	12.0
Cetyl alcohol	0.5
Lanolin	7.0
Vegetable oil	10.0
Water	70.5

Off-white, medium soft cream, completely absorbable.

No. 3

Spermaceti	5.0
Cetyl alcohol	2.0
Lanolin	20.0
Hydrogenated oil	50.0
Water	23.0

Dull finish, yellow-white, hard cream.

No. 4

Beeswax	10.0
Paraffin	6.0
Cetyl alcohol	0.5
Lanolin	10.0
Mineral oil	37.0
Borax	0.5
Water	36.0

White, medium soft, lustrous cream.

No. 5

Paraffin	10.0
Lanolin	40.0
Mineral oil	20.0
Water	30.0

Medium hard, stringy, yellowish cream.

No. 6

Paraffin	10.0
Lanolin	35.0
Mineral oil	15.0
Vegetable oil	15.0
Water	25.0

Yellowish, hard cream.

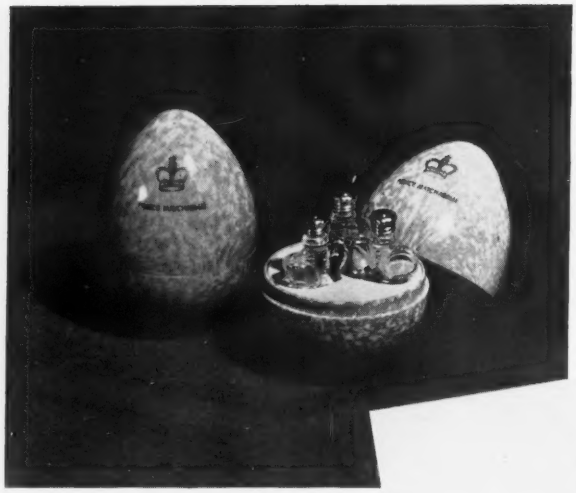
color. Except for slight bleaching it is stable under the influence of light and air. Odorless cocoa butter should be used where interference with perfume is to be avoided. It is very difficult, however, to make a really fine-grained cream containing appreciable amounts of cocoa butter.

Spermaceti is both a hardening agent and an emollient, but is subject to decomposition. Cetyl alcohol is recommended as an emollient and as a stabilizing agent for the emulsion cream.

Lanolin is the lubricating cream ingredient par excellence. In many respects it closely approximates the composition of the skin fats that it is expected to supplement and can thus be expected to have a "normalizing" influence. It is also a fine emulsifier. The color of lanolin is not a disadvantage, since consumers have come to expect their lubricating creams to be yellowish in shade. The odor of lanolin is, however, troublesome and enough perfume of the right type must be incorporated into the cream to cover the lanolin. Lanolin is also very sticky and this property should be modified by the use of other fats and oils.

(*Continued on page 212*)

THE GIFT



At the top of the page is the Prince Matchabelli Easter egg containing three small crowns, offered this year in much more colorful packages and a new selection of odors. Above is Bourjois' special Easter package consisting of a small bottle of Evening in Paris packaged in a molded blue basket.

PERFUME and cosmetic manufacturers are finding that merchandise which they have been accustomed, too accustomed some think, to consider as Christmas sellers, have continued to sell over into the New Year. The answer seems to be that such retailers as continue to promote the sale of this class of merchandise, continue to sell it. This fact combined with other forces which are at work seem to be bringing home with sudden and startling clarity the fact that as an industry and as individuals, perfume and cosmetic manufacturers have been passing up a rather obvious gift market which exists for their products every day in the year.

Every day is some woman's birthday or some anniversary which is dear to her and on which she appreciates being remembered. Approximately one million women over 15 are having birthdays each week. Close to a million and a half women marry each year which places the number of wedding anniversaries well up in the millions. Approximately half a million girls are being graduated from secondary schools and colleges each year. Using these figures as a basis for determining the potential gift market for perfumes and cosmetic gift sets every day in the year and then adding to them the special gift days upon which every woman becomes the logical recipient for a gift, the overwhelming proportions of this market becomes immediately apparent.

As a result, more manufacturers than ever before are this year giving special thought to their Valentine's Day, Easter and Mothers' Day packages and promotions. But, what is even more important, more and more manufacturers are training their salesmen and their retailers to think of the obvious gift appeal of many of the standard, staple items in the line, such as perfume, toilet water, eau de Cologne, compacts, lipsticks, and many of the packaged sets. These are highly acceptable gifts, gifts which have more glamour and psychological appeal than anything else in the moderate price class, and gifts which are obviously best suited for most of these everyday gift occasions as well as for the special gift days which have been mentioned. The Christmas gift season in perfumes and cosmetics is there and will continue to be there anyhow. But these Christmas sales will be something extra, instead of practically the entire market, if some concentrated thought is placed upon building this obvious gift market during the first six months of the year.

TOILET REQUISITES states the problem in startling fashion in its February issue, In an article entitled, "Why Not Give Perfume," that publication states that, "We have just finished another Christmas season. To manufacturers and importers of perfumes, to retailers it

MARKET IGNORED

seemed like the good old days. More people decided to give perfume than in many previous seasons.

"*And now what?* Are perfume sales to drift through the coming months, with slight signs of revival at Easter, waiting for another Christmas when a comparatively small fraction of our gift-giving population will decide, largely of their own volition, that they might as well give perfume?

"It takes art as well as business judgment to nourish successfully the fragile reputation of a perfume and to bring it to fame. There are in the perfume business some of the cleverest and and most resourceful merchandisers of any industry. But the pity of it is that all of this resourcefulness, all of the imagination and creative ability so necessary in perfume merchandising has been limited to the narrow field of competitive advantage—to a squabble for existing crumbs. Meanwhile a market for five, ten, twenty times the present volume of perfumery sold is smoothly acquired by other industries.

"Let's look at the record, as they used to say. Twenty years ago a scattered bunch of little businesses, who thought the same things about their competitors that the perfumers do, only worse, got together on the idea that they would spend some of the energy they were using to lick one another to lick other industries and steal some of their business. Maybe the perfumers looked easy to them. Anyway, these florists' tiny businesses, scattered all over the country and many times more numerous than the perfumers, did get together and formed the Society of American Florists. Their first step

(*Continued on page 213*)

Above is the House of Wembdon Easter package consisting of an attractive wicker basket filled with five items. The Joyous Easter packages are two sizes of Richard Hudnut's Gemey.

AMINO ACIDS:-

THEIR POSSIBLE SIGNIFICANCE IN DRUGS AND COSMETICS

By THORPE W. DEAKERS*

"The human body may be regarded as a highly complex and impure protein crystal"—Albert P. Mathews

ALTHOUGH amino acids may be described as compounds in which a hydrogen atom of an alkyl group of an organic acid has been replaced by an amino group: $-\overset{|}{\underset{|}{C}}(H)-\overset{|}{\underset{|}{C}}(H)-COOH$ to, $-\overset{|}{\underset{|}{C}}(NH_2)-\overset{|}{\underset{|}{C}}(H)-COOH$, they are not in the common sense of the word acids. In fact most of the amino acids are relatively neutral substances, amphoteric in nature, and thus exhibit the properties of both acids and bases.

Amino acids are the building blocks of the vast protein network of the human body. They are the main constituents of the muscles and are found also in large quantities in the hair, finger nails, and skin. Because amino acids are so closely related to the proteins, and the proteins in turn are so closely associated with the life processes that take place in the body, a study of amino acids should serve to reveal many new and interesting possibilities in the drug and cosmetic fields.

The bulk of the research thus far conducted on the amino acids must be credited to German chemists Fischer and Aberhalden, although recently in the United States such workers as Levene, Bergman, Dunn, Schmidt, Rose, Osborne, and Van Slyke have done much to establish the importance of this field by their metabolic, physiological, and synthetic researches.

Unwieldy extraction methods formerly made the amino acids so costly that few institutions could afford to purchase them for investigation. Newer more practical syntheses have replaced these unwieldy extraction processes, and now the majority of amino acids are within easy reach of most experimental laboratories.

The availability of these materials for research purposes has stimulated the interest of metabolic clinics, university laboratories, hospitals, research foundations and drug manufacturers. As a result, a number of uses have been reported for various amino acids: Glycine is now being employed in the treatment of muscular dystrophy and atrophy, and also in treating myopathia and myasthenia; histidine and tryptophan are being used for the treatment of gastric and duodennal ulcers of the stomach; Jacques Lenormand reports that intradermal injections of 2-4cc. of 4 per cent. histidine and 2 per cent. of tryptophan gave good results in treating hay fever.

From a diet standpoint, the following bit of research is interesting: A group of Soviet workers, analyzing the amputated leg muscles of an eight year old boy, found the amino acid content to be:

Alanine and Glycine	4.92%	Tyrosine	4.11%
Valine	6.44 "	Tryptophan	2.3 "
Leucine	8.88 "	Cystine	2.27 "
Arginine	8.81 "	Proline	4.16 "
Histidine	2.39 "	Ammonia	1.25 "
Lysine	6.57 "		
Phenylalanine	5.25 "		

These research workers recommended that a diet containing the above amino acids be given to growing children and advised a mixture of pea and egg products to obtain the proper food balance.

According to Russell Chittenden, histidine, lysine, cystine, and tryptophan are especially necessary for growth. He states also that histidine is the probable mother substance of highly healing allantoin.

Other uses have been recounted in the literature but most of them have not been confirmed by additional experiments. However, amino acids are being investigated in a number of phases of medicinal research. Therefore it is logical to expect that important discoveries will be made concerning their physiological uses—discoveries that should vitally interest the drug manufacturer.

On the other hand, there is the possibility that amino acids will shortly find a widespread use in cosmetics, for

*Los Angeles, Cal.

the skin contains many of these protein building blocks, and these substances may exert some therapeutic influence when employed in ointments, creams, and similar cosmetic preparations.

Referring to the amino acid content of the skin and its appendages, Vernon Wilkerson, in his paper, "The Chemistry of the Human Epidermis," states:

> "Recently information has been presented concerning the close chemical relationship of the proteins of many ectodermal tissues. It has become increasingly clear that the keratins of these structures have a similar molecular pattern, and may be tentatively defined as proteins."

In his analysis of the stratum corneum of the skin, the author finds the following percentage of amino acids: Histidine 0.59; lysine 3.08; arginine 10.01; cystine 2.31; and, although he does not make any conclusions regarding the physiological effects of these acids on skin tissue, he shows conclusively that there is a definite relation between the amino acid content of the skin, finger nails, and human hair. He gives a table to support his assertion:

Amino Acid Content of the Skin and Its Appendages
(percentage)

	Histidine	*Lysine*	*Arginine*	*Cystine*
Stratum Corneum.....	0.59	3.08	10.01	2.31
Finger Nails.....	0.49	2.42	9.3	
Human Hair.....	0.5	2.5	8.0	
Approx. ratio.....	1	5	15	

In the skin, however, these amino acids do not exist in the free state, but are bound together by peptide linkages to form protein material. How do the proteins, then, which are absorbed from the food one eats, become an integral part of skin tissue?

The method by which I have been able to describe this process is: The proteins are broken down by the stomach acids and intestinal enzymes into amino acids and simple polypeptides†. These hydrolytic products then pass from the intestine into the bloodstream, and are distributed to the various parts of the body, where in the particular case of the dermis, the basal cells of the skin reassemble the hydrolytic products into protein tissue by some coupling process.

The speed with which the amino acids are absorbed from the blood stream by the different tissues of the body is striking. Van Slyke and Meyer, experimenting on the blood of fasting dogs, discovered that normally under these conditions there were 3-5mgs. of amino nitrogen in 100 cc. 12 grams of alanine were then injected into the bloodstream. Five minutes after the injection, which took 13 minutes to perform, the blood was analyzed. Only 1.5 grams of the alanine could be accounted for at this time, and at the end of 35 minutes only 0.4 gram remained. During this interval 1.5 gram of the amino acid was excreted, and 10.1 grams were absorbed by the various tissues of the body.

†A simple polypeptide. Not more than three amino acids joined together.

Moreover, the "miniature chemical laboratories" of the skin, which convert the amino acids back again into protein tissue, have the power to rearrange them into the molecular species best suited for their individual function or purpose. Thus the proteins of the ectodermal tissues of the skin are different molecularly than the proteins of the muscles, but they are in general made up of the same building blocks—the same amino acids.

If the basal cells of the skin can synthesize new tissue by combining different amino acids into protein tissue, then in cases of amino acid deficiency, it is reasonable to expect that a cosmetic containing amino acids may be of therapeutic value to the skin, provided that the preparation is capable of penetrating to these cells.

As yet there has been little amino acid research applied from a cosmetic standpoint. However, Craps and Alechinski found that an aqueous solution of histidine (1:1000) gave favorable results when applied locally on cutaneous lesions. This is significant when one remembers that histidine is being used in the treatment of duodennal and gastric ulcers.

Pursuing a similar line of thought in connection with the *amino acid, glycine*, and its use in the treatment of muscular dystrophy, and atrophy it is logical to assume that this substance may also find employment in future skin lotions and creams to correct "skin fatigue."

Another possible use for amino acids may be in hair preparations. In the past cosmetic manufacturers have resorted to stimulants to increase scalp circulation, thus hoping to promote hair growth. Some of these products have been quite effective, but their main effectiveness, in my opinion, was largely due to the massage which accompanied their administration.

Analysis of the hair proves that it is of a protein nature, and that one of its most important constituents is the sulphur containing amino acid, cystine. Knowledge of the cystine content of human hair is not new but only recently has this information been put to practical use in hair preparations and similar products. Probably this lag can be explained by the fact that little or no experimentation had been conducted on the hair growing properties of cystine until the last few years.

One of the most worthwhile experiments along this line is written up by Hadley R. Marston. He reports:

> "The addition of one gram of cystine to the daily ration of an ewe on a low protein diet gave a 14 per cent. increase in wool growth on a circumscribed area compared with the growth during a similar period immediately preceding.
>
> "Subcutaneous injections of one gram of l-cysteine each day for ten days led to a 34 per cent. increase in wool growth. Respective ten day periods after which no injections were given gave a decrease of 30 per cent, 18 per cent., and 7 per cent.
>
> "The addition of sulphur gave *no increase in wool production.*"

Although the above experiment was not handled from a cosmetic approach, nevertheless, it should indi-

(*Continued on page 212*)

MATERIAL

EWING GALLOWAY

ALMOST every manufacturer keeps stock *records*. Very few practice rigid stock *control*. The difference between them is slight, but important. The record will show when a particular stock is in an unhealthy inventory position; a control, properly used, will prevent the stock reaching that condition, or at the least, will forewarn the man responsible.

As a business grows, it becomes increasingly difficult for any person to watch all the possible leaks without an adequate and as nearly foolproof system as possible. Unhealthy inventory conditions are among the more serious conditions that can arise as a business expands rapidly.

The basis of any control is knowledge of goods on hand. The perpetual inventory is a prime necessity and the backbone of any control system, for one or ten thousand items. This outline has been planned to fit with the purchasing department procedure previously described by the writer, and is also designed for cards, preferably visible type.

The suggested stock control record may be made part of the purchasing department record, and operated by that department's clerks, or it can be kept as a separate record, in the factory or stores department. In either case, however, the purchasing agent should be responsible for its operation. In some companies, the factory manager is responsible for the stock record but I firmly believe this is bad practice. The purchasing agent buys material to replenish low stocks and it is his decision that governs the amount to be bought and kept on hand.

The heart of the stock control system is the record card illustrated below. Every receipt or disbursement is listed thereon, with a running balance kept, showing the actual inventory on hand at all times. The supplementary records needed to keep this card are relatively few. I have made no attempt to more than outline them as the exact layout of each company's forms will differ, depending very largely on the individual accounting procedure.

I: Receiving Slip: As its name implies, this is the record of receipt of goods. Made out at the receiving platform, it should be checked by the storekeeper to insure correctness and obviate, as far as possible, any collusion between the receiving clerk and an unscrupulous vendor.

The actual arrangement of the sheet is immaterial but it must be numbered. The quantity, description or name (using the standard system of nomenclature described in the purchasing department procedure), name of shipper and purchase order number must be clearly shown. Shipping charges, number of cases, etc., are optional entries. The number of copies is determined by each company's own needs. The same copy can be used for storekeeper, stock record, purchasing record, accounts payable and cost department, if desired. Better practice is to have several copies, one for each department, as this speeds up entries on each of the several records.

The receiving slip is entered on the stock record card; quantity in column 1, date in column 2, receiving slip number in column 3 and the balance carried forward in column 5. The notation of the slip number enables a quick check-up to be made if there is any future need to compare the entry with the slip, for correctness, etc. The receiving reports are then filed numerically.

II: Withdrawal Slip or Order: No goods should ever be withdrawn from stock except on written order, signed by a duly authorized factory executive. This rule will prevent excess withdrawals as it definitely transfers the responsibility for the stock from the purchasing agent and storekeeper to the production department.

This form should show the amount of material of each kind required and the production order number. The

STOCK CONTROL

By JOSEPH W. KEMPFER

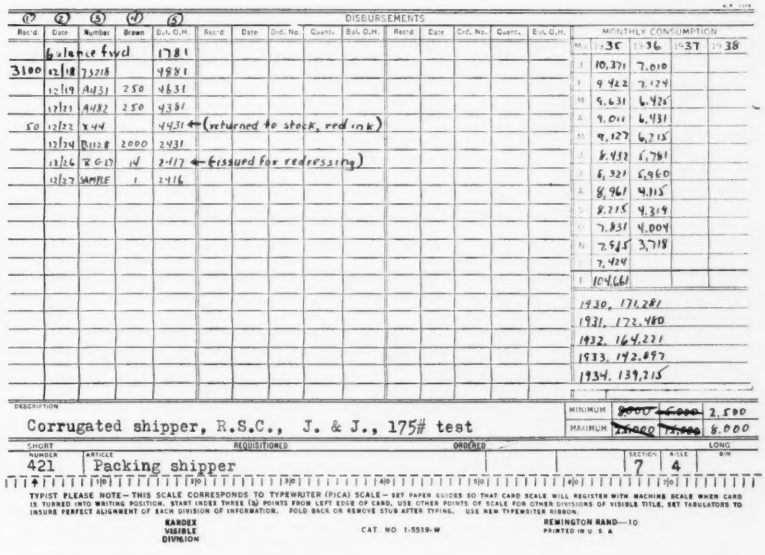
order number will make it very easy to trace any particular withdrawal. One copy should remain with the storekeeper, signed by the person actually receiving the goods. This form, bearing the signatures of both the executive authorizing the release of the goods and the man in the factory actually receiving it, is the stock department's receipt for the material. These signatures, coupled with the production order number will prevent disputes between departments as to why goods were issued, where they went, what quantities were used. If desired this copy can be used to make the necessary entry on the stock record card. This is entered as follows; date in column 2, withdrawal order number in column 3, quantity issued in column 4 and the balance carried forward in column 5.

The order forms should be numbered and filed numerically so that the entry can quickly be checked against the actual order. When several factory departments receive goods from the same storekeeper, it is a very good idea to give each of the departments an identifying letter before the number. In this way, a glance at the record will show which departments have been using various amounts of material. This is particularly helpful in watching stock such as raw materials and chemicals, used in several factory divisions.

III: Miscellaneous Forms, Goods Returned to Stock, etc.: Very often goods are returned from the factory to the storekeeper. This may be because too much was withdrawn, cancellation of orders, or for other reasons. Entry of these returns must be made but they must be kept separate from ordinary receipts. Otherwise, at the end of the month, a recapitulation will not show the correct amount actually *used*. Therefore, enter as receipts, but use a different color ink. At the end of the month, these figures will decrease the withdrawals rather than increase the receipts.

This same applies to material withdrawn for samples, donations, etc. They must be entered to keep the inventory correct but the figures must be distinguishable from regular withdrawals for production, as this material was not *used* in the true sense of the word.

With redressed goods, another question arises. Shall material issued for redressing purposes be included as an actual use or shall it be handled as samples are? I favor handling the entry as if it were actually for production. While it is true that such an amount is not actually produced by the factory, it is generally true that, if it were not for the redressed goods, the factory would have produced that much more. As the stock record is not a production record, but rather a record to enable the purchasing agent to control the inventory, whether the factory actually produces 100 pieces, or



only makes 50 and redresses 50, for a total of 100, is immaterial.

For accounting purposes it may be necessary for some companies to have separate forms for these miscellaneous entries. In others, particularly the smaller ones, regular entry forms can be used, with the special purposes written or noted on them.

The same is true with goods returned to stock from packages broken up for any reason. They should be added to the receipts, not deducted from the withdrawals. Therefore, there should be a clear notation on the return form, unless a special form is used.

The above are the necessary supplementary records needed to maintain the stock record card and perpetual inventory. The complexity of the forms, number of copies, and so forth, is up to the individual user and, as mentioned before, more dependent on accounting procedure than stock control needs. From this point on, the stock record ceases to be a mere record and commences its control function.

At the right of the card is space for noting the monthly consumption over a period of years. These figures are the basis of actual control. Monthly, the record clerk totals up the actual consumption of each item and enters it in the space provided. In doing this, he must watch and compensate for the special entries such as goods returned to stock. To make this tally on all items does not take as long as one may imagine. A good clerk, working with a comptometer or similar machine, should do several hundred in a day. The entire list need not be finished in one day, however. One firm totals items as they are requisitioned and gradually, over the month, completes the work. In this way, the actual time spent on the tally in any one day is relatively small.

If such a recapitulation is not made, there is no precise way to tell if consumption is rising or falling. Consequently, without this actual month by month record, any attempt to plan or control material purchases will be based on guesswork. The purchase record, while it is of tremendous value in other respects, will not show this trend either way with any accuracy until several months have elapsed. Many companies keep a sales by items record. In a few cases this record can take the place of a consumption record and serve the same purpose but usually it is only of secondary value, as a check. The reasons for this are fairly obvious. In the first place, a great many materials are used in varying amounts in more than one package. Complex formulae with fractional parts of a gram used are another difficulty and the resultant time needed to break down sales figures to actual amounts of materials consumed is very often far greater than the time used in making the above recapitulation. Another very important factor in making the consumption figures the basis for control rather than sales figures is that only the former will show the rate at which the factory uses the material and the size and frequency of production orders. This particular phase is very important to the purchasing agent and can only be obtained from actual withdrawals.

The first function the recapitulations perform is aiding the purchasing agent to set the minimum amount of material to be kept on hand. Bearing in mind three things, the size and frequency of the usual factory withdrawal and the length of time needed to procure the item, he sets this figure at such a level that, theoretically, it works out as follows. The amount on hand reaches the minimum figure, the storekeeper requisitions more goods while the new purchase arrives before the stock has dropped so low that there is not enough left to fill a regular factory order for a normal amount.

For example, if the factory orders 100 every week from the storekeeper, and it requires two days to obtain material, 100 is a sufficient minimum. On the other hand, if it requires four weeks, or possibly five, to procure the item, then a 500 or 600 minimum is necessary. The length of time needed by the purchasing agent to secure quotations and place the order, after he receives the requisition, must be included in calculating the necessary time allowance. Goods on contract, available immediately, must also be considered, as very often it will be decidedly advantageous to make quantity purchases for several months ahead and secure the benefits of reduced prices.

Certain complications arise in setting this figure. When the factory produces only occasionally, it is a difficult matter to decide what to do. Shall the purchasing agent set the minimum to cover the size of the usual withdrawal, and then order, at once, enough to cover the next withdrawal, or not? To do so will often mean holding material on hand for some months before it can possibly be used. Perhaps a better way is to set the minimum to cover the withdrawal, issue the requisition and then the purchasing agent holds the requisition in his file for a time before placing his order, checking frequently to see how the finished stock is moving. The one danger in this method is that the purchasing agent may bury the requisition in his file and fail to order at all. A good followup system should prevent this, however. Each man will have to decide this for himself, and it will usually be handled differently on different items.

This situation is another reason for using consumption rather than sales figures as a control. On an item of this nature, sales will be relatively uniform from month to month and a recapitulation made from sales figures will not show the spasmodic production peaks. Very often, in such cases, it is necessary to produce relatively large amounts two or three times a year. If the production manager has waited, as he should, until the finished stock is very low, before placing a production order, a backorder situation is almost sure to develop if the P. A. has looked only at the monthly sales record and has ignored the larger amount needed for the production order.

Any condition of this sort can be seen by a glance at the consumption figures which will show a withdrawal one month and blanks for several following months. With the knowledge gained from a record of this sort, the purchasing agent can often correct unnecessary

evils. It is not always essential for the factory to produce in this manner and calling it to the attention of the production manager will often be enough to stop it. Sometimes, of course, economic reasons make this course inevitable.

In the same way, various other regular, recurring patterns can be seen in the records of other items. For example, a consistently good seller will show a fairly uniform rate of withdrawal. A definite knowledge of how the factory uses each material, particularly if compared, when possible, with the sales figures, will provide the purchasing agent with information he cannot get in any other way and, in almost every instance, insures his decision on what to buy being correct. There is one thing to remember, however. No minimum in the world, and no record of past performances, will be of the slightest value if there is a radical change in the sales of any item. Whenever the sales department puts on a special deal, whenever the introduction of a new product will kill the sales of an old item, or any other outside influence of this sort exerts its effect, past records cease to have any real value. The sales department *must* bear this responsibility and notify both the production and stock control divisions if, in their opinion, there is likely to be any unusual increase or decrease in sales. Absolute cooperation from the outside selling force is necessary so that the purchasing agent may accurately plan ahead where the stock movements will differ from the ordinary.

It is imperative that the minimum be changed if it is seen that use of any material increases or decreases. (This does not mean momentary spurts or drops.) Failure to change this figure, when necessary, is a frequent cause of over or under stocks. The storekeeper or record clerk must watch this and the purchasing agent must see that he does and check, personally. If the curve is going up or down, the facts can readily be seen from the consumption figures on the card, and if desired, checked with sales.

The maximum figure works the same way and serves as a check, to prevent stocks getting too large. As consumption falls, this figure decreases and the purchasing agent must note any stocks which are approaching or greater than the maximum. Special steps should be taken at once to notify the sales department with a view to moving them by a special effort before they become obsolete.

It is especially necessary to watch for any downward curve in the sales. If the purchasing agent is not extremely careful, he may place an order which appears to be conservative, only to find that the item is dead long before the material is disposed of. When an item starts to slip, it invariably goes fast. In this connection, it is also necessary for the production manager to be on his toes as well. If finished stock is piled up with no regard for actual needs, the puchasing agent can readily obtain a wrong impression from the factory production withdrawals. Bearing this in mind, the wise buyer will form the habit of working closely with the production manager and watch finished goods as well. The natural tendency of the factory to keep ample stocks of finished goods will be materially lessened if the production manager can rely on the purchasing agent to have the necessary materials ready when he needs them. The greater the efficiency of the purchasing department in this respect, the less will the factory run up huge stocks as a "safety measure" and then lay the blame, usually with justice, on the purchasing agent if any of the stock becomes obsolete.

Long or short conditions of stock can be shown at a glance by the use of colored signals at the points indicated on the illustration. When a requisition has been placed, a signal can be inserted at "requisitioned" and when the material has been ordered, another signal can show this. A system of using these signals to insure careful follow-up can readily be worked out to fit each individual company's needs.

When the purchase requisition is made out by the storekeeper and sent to the buyer, it should show the consumption figures of the past several months, as well as the minimum and maximum. Thus the purchasing agent has before him the exact amount and rate of use when deciding the proper quantity to order. At the same time, he can revise the minimum and maximum if necessary. A separate card for the recapitulations can be used instead of combining them with the perpetual inventory as on the illustration. This card can be of a smaller size and kept in the same pocket as the larger card. It would then be sent with the requisition to the buyer and returned when the order had been placed. The use of such a separate card would save some clerical work of copying figures onto new perpetual inventory cards and purchase requisitions.

This article is not intended as a treatise on how the purchasing agent should place his order, but it is evident that with the history of actual consumption before him, as well as past purchase records, he is in a far better position to control his inventory and prevent over and understocks than if he relied only on his purchase records where there is a very decided time lag before an increase or decrease shows up.

Any system of this sort, however, regardless of how carefully it is tabulated, will be valueless if the purchasing agent places his orders in the routine manner, "same as last," and ignores the information presented to him by the figures. No system is ever any better than the use made of it. At the same time, proper use of the consumption records, and the minimum and maximum figures, adjusting them when necessary, will prevent nine out of ten bad inventory conditions. Guesswork will be almost entirely dispensed with and the purchase orders placed on a scientific basis, enabling the buyer to take advantage of any possible quantity discounts without the gnawing fear that he may be buying too much, or else to buy from hand to mouth if the condition is reversed. Understocks with their increased production costs and extra charges will be largely eliminated and huge overstocks will become a thing of the past in most cases.

Tested Formulas

(*Continued from page 203*)

Many other substances, cholesterin, lecithin, various vitamins, hormones, etc. have been suggested for incorporation in lubricating creams. The evidence in favor of these additions is indeed impressive and almost any cream would benefit by the incorporation of one or several of these substances. They will not be considered in this place, since they are added only in small proportion and have little or no effect upon the physical properties of the finished preparation.

Preservation is an important problem in cosmetics containing animal or vegetable oils and fats, and must be attacked from two angles. A preservative must be added to prevent bacterial decomposition while an antioxidant is required to retard the action of the air.

For emulsification, the standard beeswax-borax combination is very useful and requires no special description. Lanolin can also serve as a basis for emulsified creams while the lanolin absorption bases are exceptionally powerful emulsifiers. Twenty-five parts of two of the commercial absorption bases made stable creams with seventy-five parts of water, but this is only mentioned to show emulsifying power, the creams not being altogether satisfactory as finished products. Glyceryl monostearate is also a good emulsifier for these creams. There seems to be no clearly defined difference in the action of lubricating creams in so far as they are made as water-in-oil or oil-in-water emulsions. In general, the water-in-oil products have a duller surface luster. As has been indicated in previous articles in this series, hardening agents are generally necessary to change the consistency of the cream. Paraffin or ceresin are the commonest substances of this type; spermaceti is also useful. Petrolatum is often advisable to prevent leakage of oil.

In the accompanying formulas, creams have been originated along two lines—those completely absorbable and those partially absorbable. In the first instance, it is merely necessary to choose emulsifiers and hardeners from the group of animal and vegetable products to assure complete absorption. The glyceryl monostearate cream given can be especially recommended if total absorption is required.

Although the extremely low alkalinity of beeswax-borax creams could not possibly lead to any irritation or other adverse effects, it may sometimes be desirable to formulate an acid cream with the same pH as the skin surface (from 5.0 to 7.0). A small amount of acetic, lactic, or other organic acid will serve the purpose. Acid, however, will cause the immediate destruction of beeswax or the usual glyceryl monostearate creams. A special monostearate product is available for the manufacture of acid creams. Acid may, of course, be added without trouble to lanolin or absorption base creams.

Creams are manufactured by the same procedure used for similar creams of different cosmetic types. For beeswax creams, add the borax dissolved in water to a melted mixture of the fats and oils, stir rapidly at first and slowly until cold. Creams with glyceryl monostearate can be made by two procedures, namely, melting all the components together, including water, and then stirring until cold, or by heating the oily and the water soluble components separately and then mixing them. Absorption base and lanolin creams are made along identical lines. Melt the fatty mixture at a low temperature and slowly stir in the water a little at a time.

Manufacturing directions often specify melting the highest melting fat or wax and then adding other materials in the order of their melting point, ostensibly to keep the temperature of the mixture low. These directions are somewhat ridiculous, since they result in a higher temperature than necessary. In the laboratory here, first the oils are heated and then the fats and waxes are *dissolved* in the hot oils. Thus, by solution rather than melting the temperature of the whole batch can be kept well below the melting point of the highest melting constituent. If especially heat sensitive ingredients are being utilized, it is better to make a homogeneous solution of all the other components, allow the mixture to cool to a safe temperature and then add, with stirring, the sensitive materials. Temperatures above 65° C. are seldom necessary in any event.

Amino Acids

(*Continued from page 207*)

cate the possibilities of cystine and cysteine in hair preparations. The main thing from a cosmetic point of view is to get these preparations to penetrate to the basal cells. Cholesterin ointment bases may act as carriers for this purpose.

This article should introduce another field for future research in the cosmetic industry. Generally speaking, cosmetology has been mainly concerned in the past with fats, oils, and lipid balance in its dealings with skin therapeutics. However, it must be borne in mind that other factors beside these may enter into skin physiology,—the protein biochemistry of the skin must also be studied, for, says Albert P. Mathews:

> "When we look at the human body what we see is protein. For all of the exterior of the body, the surface of the skin, the hair, the nails, the whites of the eyes, the iris, the cornea, are constituted of proteins. The blush of the maiden's cheek is due to a red protein circulating in her blood. Our mouths are moistened by saliva and the slimy lubricant in that saliva, the mucin, has proteins as well as carbohydrates in it—Proteins are organic compounds which, when hydrolysed by enzymes or by acids, yield *amino acids*."

Thus, in the beginning, the skin proteins can perhaps be studied most effectively by breaking them down into their component amino acids and by noting the dermatological effects of each of these simpler substances. From this type of research should then follow those corollaries which will assist us in a more thorough

understanding of the amino acids and their future place in cosmetics.

Cost of Amino Acids

	Chemically pure grade	
	10 grams	*100 grams*
dl-alanine	$ 0.65	$ 4.50
dl-aspartic acid	2.00	19.00
l-aspartic acid	2.00	19.00
l-cystine	1.90	14.00
d-glutamic acid	....	3.75
dl-glutamic acid	14.50	130 00
glycine	....	2.15
dl-isoleucine	7.50	72.50
dl-norleucine	2.70	26 00
dl-phenylalanine	4.40	40.00
dl-serine	13.50	125.00
l-tyrosine	2.00	18.00
dl-valine	3.50	32.50

Citrus Oils

(*Continued from page 191*)

export and home trade demand. The price of California oil has risen from $1.75 per pound in January 1936 to a current market price of $3.50. With a scarcity also existing in Italy and a correspondingly strong market existing there, the future from a consumers angle does not look at all promising.

It is reported in the industry that high prices prevailing for the citrus oils have caused an especially heavy and steadily increasing demand for the imitation oils and should prices continue to advance an increasing part of the market may be lost to the imitation oils.

Gift Market Ignored

(*Continued from page 205*)

was a home run with the slogan, "Say it with Flowers." That slogan in our opinion, and in the opinion of others to whom we have talked, has cost perfumers many thousands of dollars. They did a remarkable thing next. They dug up $50,000 for trade promotion. During these years the business in flowers has doubled, trebled and then doubled up again. People give flowers naturally on any occasion. The idea comes so easily. The execution is so painless. Why not? The florists are spending $500,000 a year now to make people feel that way and some clever, shrewd planning has gone with it.

Iodine

(*Continued from page 188*)

As long as iodine was needed as a medicine only, high prices could prevail. When opportunities opened up industrial fields, where demand might, on short notice, increase appreciably, others became interested in a hitherto rather unprofitable field.

* * * * *

Extraction of iodine from seaweed or kelp has always been the most costly process. Not all seaweed contains recoverable amounts. In some instances divers must be employed to get the weed from deep water. In others, the supply is limited and the kelp must be imported. Often 25 tons of seaweed are required to give 5 tons of dried weed or 1 ton of ash. From this ash about 10 kilos of iodine will be obtained. Costs average from $2 to $3 a pound.

At the present time France, Norway, Scotland and Japan are making iodine from seaweed. During the War small amounts were made in this country from kelp along the Pacific coast and in Louisiana but these attempts were abandoned shortly after the close of the War.

In 1928 Italy found that certain mineral well waters offered a new source of iodine and today that country can, if conditions warrant, produce enough to supply her own needs. From Java comes iodine extracted from artesian well waters, profitable at $2 a pound.

These several developments in the 1920's led to an accumulation of stocks in Chile. Many manufacturers had formerly produced several times their quota in one year, storing their stock as collateral for bank loans. But now the market was shaking. Then came a new development in this country.

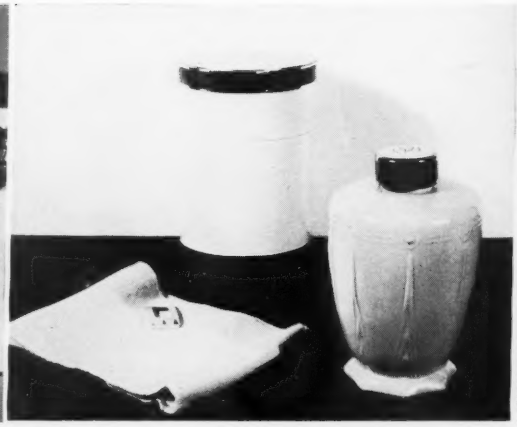
Extensive experimental work had proven that iodine extraction from the brine of oil-well waters was practical and profitable at the prevailing iodine prices. In 1932 several plants in California and the Dow Chemical Company of Michigan were operating and the output that year was 173,953 pounds. In 1933 this rose to 401,525 pounds.

With present prevailing prices, most of the production in this country has been abandoned. The Dow Company is operating its subsidiary, the Io-Dow Company, in Long Beach, California. Another small concern or two is producing minor amounts. Production in 1934 was only 284,604 pounds and in 1935, only 245,696. Figures for 1936 are not available.

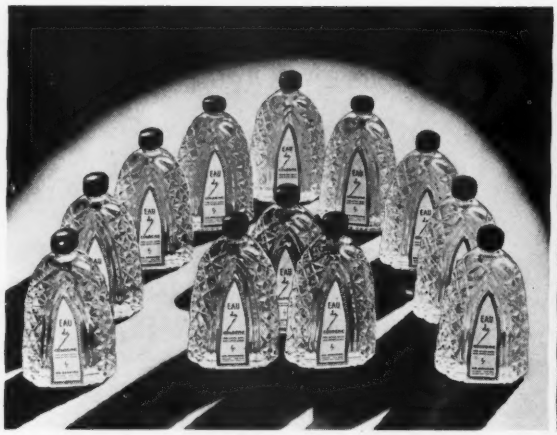
The threat, however, has been effective. It is known that plants would spring up like mushrooms with iodine at $4 a pound. A few would find it profitable at $2 a pound but Chile would have the bulk of the market under that price.

It is said that Russia is planning to become second largest world producer in a short time, also using oil well water as her source. Both that country and the United States could easily take care of their requirements in time of war with little additional equipment. Germany is now making it from her coal deposits.

World needs are estimated at 2,000,000 pounds. Domestic requirements in this country are 300 tons and capacity production could easily be 500 tons. Main factors of cost in oil well water production are the facts that not all wells have recoverable amounts. Removal of silt and emulsion are costly. The brines corrode the bronze machinery rapidly. And Chilean nitrate mother liquor contains 150 times as much idone as do the brines. But our oil well water iodine is pure and uniform. Processes may improve and become less expensive. And if iodine becomes more widely necessary, with a corresponding advance in price, this country may become the center of a highly profitable industry.

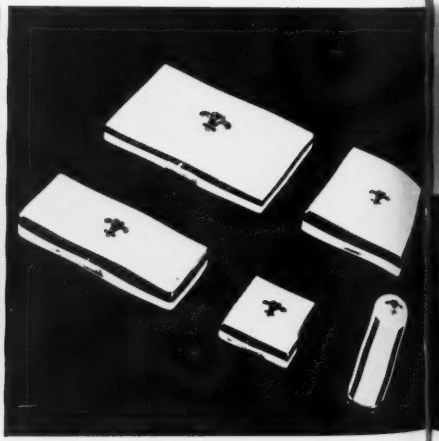


ALLEN'S
2-DROP
HAND LOTION



NOONAN'S
VITAMIN
F
TREATMENT

ANTISEPTIC
Seventeen
SUN TAN OIL



KIMBLE GLASS

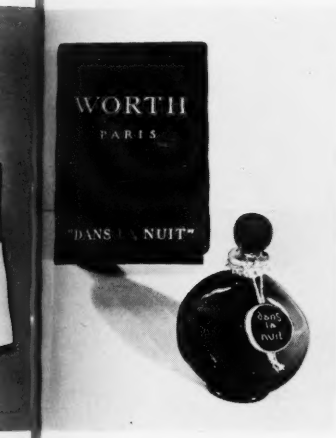
Illustrated are examples of two glass containers fabricated by Kimble Glass Company for Lederle Laboratories and for Dundee Co.,—a set of three glass serum bottles containing Lederle Liver Extract, and a glass screw-capped vial containing Dundee Radiator Compound.

BARBARA GOULD

Barbara Gould has developed a preparation for the neck and chin called "Firma-Tone." This helps to stimulate, exercise and strengthen muscles of the neck and under chin. A chin strap is included in the package.

MARK W. ALLEN

Mark W. Allen & Co. is offering a new package of "2-drop Hand Lotion." The color scheme of the labels, caps, and boxes is brown and red, and makes an attractive combination. Photo courtesy Hazel-Atlas Glass Co.



FEDERAL PHARMACAL CO. INC.

The Federal Pharmacal Co. Inc., has introduced Ultra Violatum (liquid) in Irradiated Mineral Oil. This is pure mineral oil, treated with ultra violet light. Ultra-Violatum (liquid) is packed in one pint bottles of blue glass.

HELENA RUBINSTEIN

Helena Rubinstein's lipstick is identified by the number "715," which is the number of the new salon on Fifth Avenue. The lipstick comes in an attractive gold case on a black base and is available in all Rubinstein lipstick shades.

ALLEN B. WRISLEY

Eau de Cologne by Gerarde is a product of the Allen B. Wrisley Co., which recently won honorable mention in the Syndicate Store Merchandiser's 5 & 10; Store Packaging Contest. Screw caps by the Aridor Co.

T. NOONAN & SONS

The T. Noonan kit contains Vitamin F scalp cream, shampoo, hair tonic, hot oil scalp treatment and scalp lotion. The kit is sold to barber shops and beauty parlors for Vitamin F treatments.

WORTH

Worth's "Dans La Nuit" perfume is now available for the first time in this country, in a half ounce size. It comes in the same midnight blue Lalique bottles with attractive silver trimmings, which marks the larger packages.

HOUBIGANT

Houbigant has announced the introduction of the "Paris Fashioned" lipstick in a large and easy-to-handle case with swivel mechanism. The design is a simple patrician style with a plastic cover, available in three smart colors.

SEVENTEEN, INC.

Seventeen's Sun Tan Oil has a four-fold purpose: first, it acts as a filter for the harmful, burn-producing rays of the sun. It protects the skin, insures a beautiful, even tan, and lastly, its nourishing, lubricating properties tone and stimulate the skin.

KATHLEEN MARY QUINLAN

Kathleen Mary Quinlan has introduced a complete set of powder and rouge compacts and adorable new cases in matching design of ivory and gold finish with three-feather crest, for lipstick, eyeshadow and cosmetique.

CUTASY LABS.

A new system or method has been developed called the Pomay Rx 7 Method of Weight Reduction, which is marketed by the Cutasy Labs. The Pomay Method is a method of reducing through perspiration. The product, an odorless, harmless, nontoxic cream, induces copious perspiration without exercise and with only a moderate amount of heat. When the cream is wiped off, excessive perspiration ceases.

PEGGY SAGE

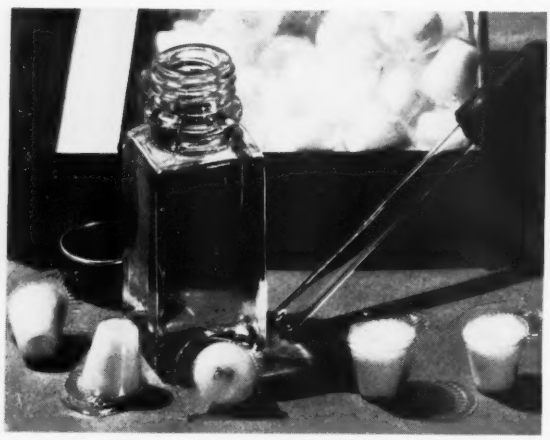
Peggy Sage's package in the form of a book is entitled "Hand Culture" by Peggy Sage. When opened the book reveals trial sizes of hand cream and hand lotion, and regular sizes of nail polish, polish remover, emery board and orange stick. This is a special package offered for a limited time only.

ELMO

Elmo uses Plaskon for the containers of its latest line of rouges. The containers are colorful and will not chip. Molded by Armstrong Cork Products.

YARDLEY

Yardley offers a new formula for eyeshadow—transparent and silky, in four soft shades to enhance the natural color of the eyes by veiling the eyelid lightly with a misty transparency that cannot be detected. The little plastic containers have sky-blue lids modeled with the Yardley Honey-Bee motif, and white bases which throw into relief the exact shade of each eye-shadow.



C. D. BURCHARD, INC.

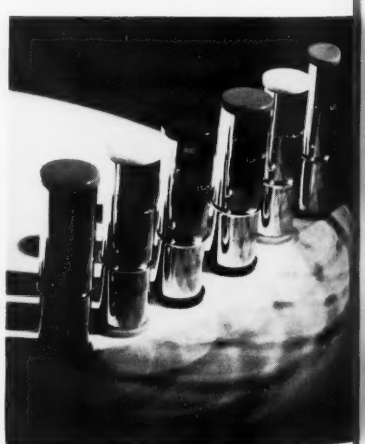
A new type of nasal inhaler has been developed by C. D. Burchard, Inc. Each inhaler consists of a molded transparent, featherlight shell, which carries cemented in a perforated pad of cotton, to be medicated from the bottle before use. A novel method of automatic molding made production of these inhalers possible.

CORDAY

Corday's "High Test" Lipstick defies the temperature—it can face arctic cold or tropical heat, without losing its rich creamy texture or varying its color.

LENTHERIC

Lentheric's face powder will now be available in a trio of fragrances: Miracle, Gardenia de Tahiti and Tweed. This face powder will be of a special weight designed to meet the requirements of the largest possible number of women. The boxes are square and in individual color schemes, harmonious with each respective perfume package.



GUERLAIN

Guerlain's newest lipstick shade is called "Mandarine"—bright, light and vivid. It is a brilliant yellowish rose, which can be worn by blonde, brunette and red-head. The addition of the Mandarine shade gives Guerlain six shades of lipstick, all packaged in the same smart metal containers with different color bands and tops for each shade.

COSMETICS ALOFT

SEVERAL of the manufacturers have worked out a joint promotion with United Air Lines in connection with the introduction and operation of the "Mainliner" fleet of planes. These "Skylounge" transports are not only equipped with the products of these manufacturers but, in line with the promotion, all the pilots and stewardesses use these products exclusively, and every passenger on these planes is presented with an overnight kit containing the products of these manufacturers. The featured treatment line is Dorothy Gray; the featured make-up is Tangee; the men's line is Pinaud; and Pebeco is the featured tooth paste.

The treatment line kit contains Dorothy Gray's quick cleansing lotion, brittle nail cream and face powder, with powder puffs by Victoria Vab. Not to be overlooked are the kits themselves, made by Glida Corp., and offered in colors matching the interior decoration of the planes. The other kit for women passengers is devoted entirely to make-up items by Tangee—powder, rouge and lipstick, together with powder puff and comb.

The United Air Lines have not overlooked the male passenger on their "Skylounges" and for him they have a special overnight kit which contains Pinaud's preparations—talc, Extrait Vegetal and shaving cream. Besides the Pinaud items, the kit contains tooth brush, comb, razor, and a tube of Pebeco tooth paste.

The use of these preparations on these planes offers the manufacturer not only the opportunity to do a sampling job in a very discriminating market, but also affords the opportunity for all sorts of advertising and promotion tie-ups. The air line will feature these products in their advertising and it gives the manufacturers themselves a beautiful background for advertising, window displays, retail promotions, etc.

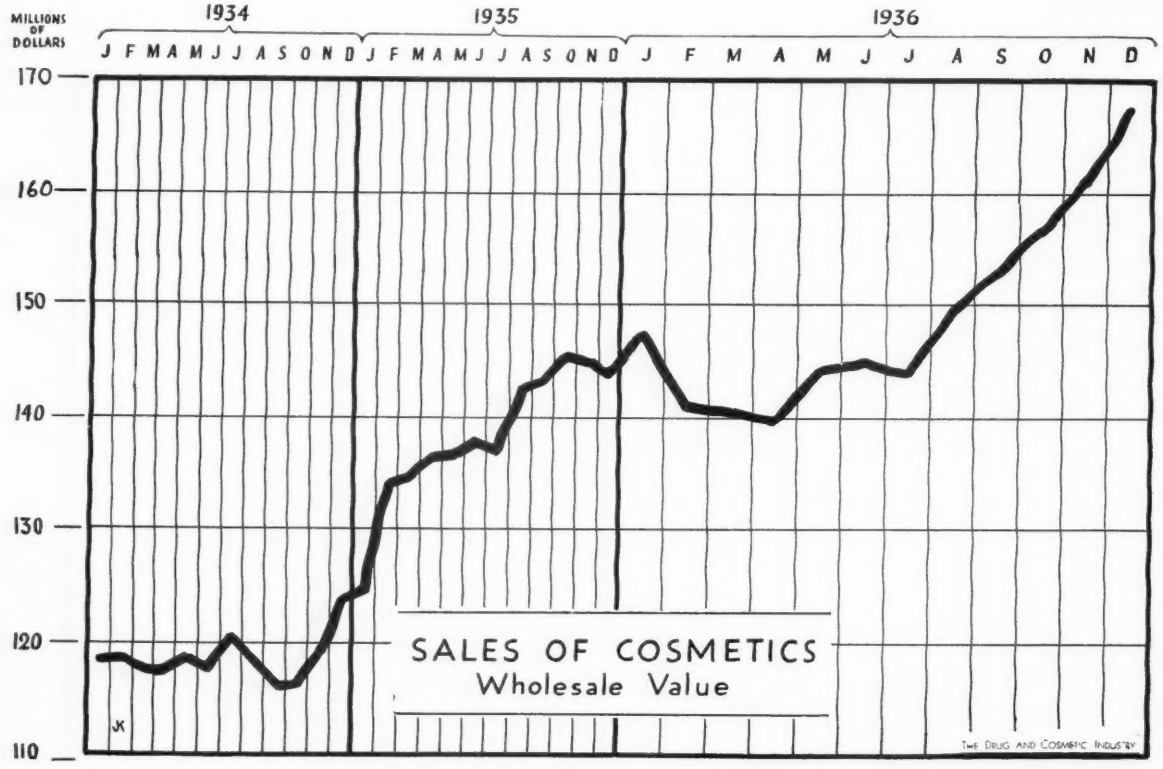
Plans are now under consideration by each of the manufacturers involved to see how it may be possible best to capitalize upon the promotional possibilities of this tie-up with the air line. It is thought that there may be some developments in the way of testimonial advertising, from some of the pilots for example, describing the importance of appearance and good grooming in their particular job and then emphasizing the fact that they use Pinaud's preparations to achieve this. The stewardesses of the various planes may also be featured in somewhat the same manner by the other manufacturers. And, of course, the air line may be counted upon to make capital of the fact that these kits are given away to all passengers taking extended trips on the new "skylounges" and naturally the manufacturers' names will be prominently featured in this publicity and promotion.

All in all, this appears to be a happy tie-up for both cosmetic houses and the air lines, and the wonder of it is that it isn't being done by and with companies offering other modes of travel.

MERCHANDISING NEWS

THE TREND IN COSMETICS: The abdication of King Edward and the ascendance to the throne of the British Empire by his less colorful brother seems to have taken much of the bloom from the coronation festivities in this country. Less is heard of coronation merchandising promotions, coronation colors and coronation fashions. Business has taken on a strictly American note almost overnight. The best that can be expected apparently is a short coronation vogue, starting probably in the middle of April and lasting to the middle of May. However, the movement had gained sufficient impetus to make impossible its complete eradication from the market picture. The dominant colors will be blue, purple, and red; only they will not be called so frequently coronation colors. The trend to old fashioned scents will continue but there is a definite ascendancy of oriental bouquets. The trend to purplish and bluish shades in nail polishes, powders and make-up is to be maintained.

The cosmetic demand in the Southern resorts, Florida especially, indicates that color is running riot in all outdoor and beach wear. More costly materials are worn and, contrary to expectations, women give preference to the darker and more alluring shades of make-up.



Wholesale sales of cosmetics for the twelve month period ended December 1936 again broke through a new high, total sales for the period reaching $167,700,000. This is an increase of 16.7 per cent over the $143,700,000 total for 1935 and an increase of 35.4 per cent over sales of $123,800,000 for 1934.

This is especially pronounced in evening make-up. Sandals continue to be worn exposing the toe nails and feet more than ever and requiring cosmetic attention. Tan has returned again to fashion and heavy scents are in the lead. As Florida, so, generally, goes the North.

Buyers are watching the Florida situation closely. Most of them feel that the pastel shades of make-up offered in the European market will fall flat in the United States, even if they should have a short run early in Spring and that the more pronounced color shades will be the real sellers. However, they will let themselves be guided by the situation as it develops. The opinion is frequently heard that the market is short of in-between shades in powders and nail polishes.

Hair preparations will find more attention this coming summer. Women are letting their hair grow longer and many of the pre-war hairdressing aids are coming back. Some stores have experienced an increasing demand for brilliantine. Buyers believe that they will be able to do good business this summer with travelling sets of hair beauty aids. Larger, similar sets have been selling well in recent months, but more sales can be obtained with a more handy package. Department stores have had a fair demand for faded hair correctives last year and expect that this will grow during the summer.

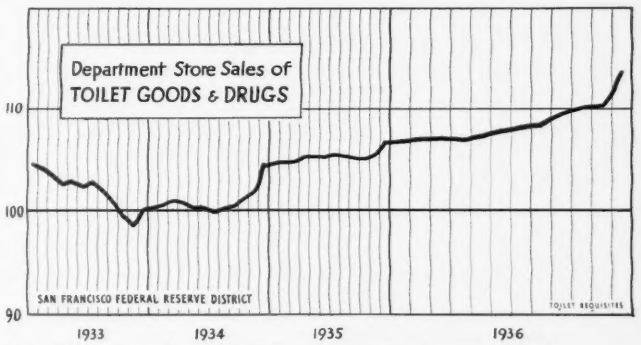
Practically all leading stores and chains are planning pre-vacation promotions this summer. Travel aids, combination sets, tan lotions and creams, foot beauty aids, skin preparations and bath room necessities will be featured. The idea is to keep as much of the vacationist's business in the home town stores as is possible.

There is a definite need for a handy foot beauty kit, adjusted to the summer needs of the customer, with a possible, new outlet for it in the sandal departments of shoe shops and drug and department stores in summer and seaside resorts.

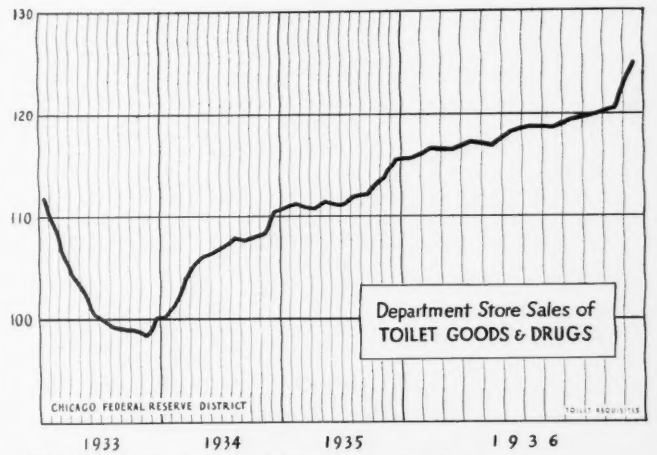
The low unit price chain stores are in the market for better grade compacts and other toilet necessities, including perfumes. The situation is complicated by the fact that store units are left very much to decide for themselves. The top price for compacts in most of the former dime stores is 50 cents retail. Quite a number of them, however, are handling combination sets costing one dollar. Nobody cares to say where the present development will lead to. There are indications, however, that these stores will soon be outlets for much superior merchandise to that which they have handled heretofore.

GILLETTE BRUSHLESS SHAVE: Gillette Safety Razor Co. is planning to market a brushless shave. Test campaigns have been held in Springfield, Mass., which appear to be forerunners of a national campaign.

Actual data from the Federal Reserve Board indicates that department store sales of toilet articles and drug sundries participated to a large extent in the great increase in sales for December 1936. In the New York district, retail sales were 18.3 per cent. greater than in the same month of the previous year. This corresponds to an adjusted index number of 111.1 for December 1936, comparing to 108.1 in the previous month and 97.5 for December 1935.



The West Coast shared in the December upward spurt enjoyed by other sections of the United States, retail sales of toilet articles and drug sundries by department stores being 16.0 per cent. greater for the whole district than in the same month of 1935. The increase was 15.1 per cent. in Los Angeles, 15.8 per cent. in San Francisco, and 20.6 per cent. in the stores of the Pacific Northwest. The corresponding adjusted indexes for the district as a whole were 113.5 for December 1936, 110.3 for November 1935, and 106.8 for December 1935.



Toilet goods departments of department stores in the Chicago Federal Reserve District had a pretty exciting time during December, sales of toilet goods and drugs being 22.9 per cent. higher than in December 1935. This corresponds to an adjusted index number of 124.9 for December 1936 compared with 120.5 in the previous month and 115.5 in December 1935.

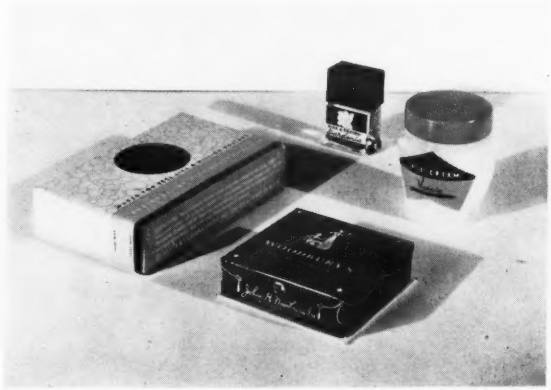
PACKAGING NOTES

PACKAGING SHOW PROGRAM: The coming Packaging Show at the Hotel Pennsylvania, New York, March 23 to 26, assumes added significance and timeliness in view of the recent criss-cross of economic and legislative developments influencing marketing, according to the American Management Association which sponsors this annual event.

The preliminary program gives the morning of March 23 to Package Design, while the luncheon session afterwards will be featured by the presentation of the Wolf Awards for outstanding packages of the year. Wednesday morning's session will be devoted to Packaging Materials, and the luncheon session to Packaging as a Management Problem. A concurrent session on Bulk Packing will also be held Wednesday morning and this session will meet again in the afternoon. Concurrent sessions on Packaging Machinery and Packing and Shipping will also be held on Thursday, with both groups meeting morning and afternoon.

An attendance of 10,000 from all parts of the country is anticipated by the American Management Association which also cites as evidence of a markedly heightened interest in packaging the development of a conference program exceeding, in scope and in diversity and number of topics, any previous conference of this character; the fact that all booth space in the exposition has been leased for weeks, despite an original twenty per cent. increase in exhibit area over last year's record exposition, and subsequent space additions; and the unprecedented interest in the competition for the Sixth Annual Irwin D. Wolf Awards, America's highest honors for distinctive merit in packaging.

CRUISE BAG: There are so many bags on the market that just another bag isn't news, but the new cruise bag introduced by Primrose House is worthy of note: It is ideal for cruises or Southern climes or later, for summer sports. The bag is a smart complement to the costume, besides being a practical aid to beauty. In linen crash trimmed with either red or blue patent leather, it has the new swing handle, a zipper closing and a rubber lining. It contains seven beauty "musts," and there is ample room besides for a change purse, cigarettes, a handkerchief, etc., and therefore, eliminates the need of carrying another handbag.



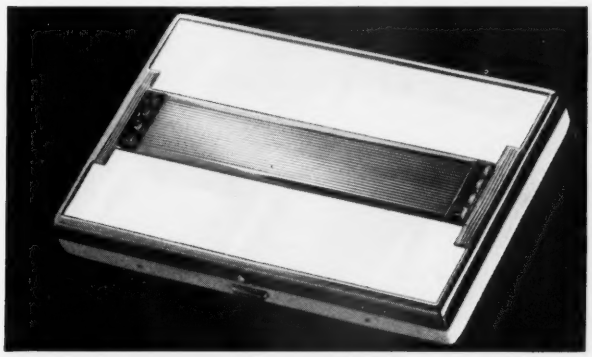
TEN-CENT PACKAGE WINNERS: The John H. Woodbury 10-cent package of face powder was awarded first prize in the annual 5 & 10-cent Packaging Contest sponsored by the "Syndicate Store Merchandiser." Ten prizes were awarded and, in addition to the first prize, to Woodbury's package, cosmetics were

Important Cosmetic Firms Find SCOVILL Service Profitable for Individualized Metal Containers

SCOVILL is, we believe, justly famous for its custom-made metal containers and closures, designed and fabricated to fit the special needs of large-order nationally advertised lines. These customers have found from experience that it's profitable for them to call in Scovill when they consider introducing and styling a new line—or restyling an old one. When such a situation is presented, Scovill's art staff gets busy on designs and original, exclusive consumer-appeal items. With them, Scovill engineering and production men follow through on each step to see that—in addition to maximum style appeal, finish, novelty and use-convenience—costs are held in keeping with the item to be sold.

Not so well known but important to many—Scovill also serves the needs of numerous moderate-size firms who want custom-built style and quality in their containers at a price they can afford. Though Scovill does not carry in stock complete items for small-volume delivery (few gross), we are often able to render a custom-built service on medium-sized orders. By adapting or slightly changing standard parts, this Scovill versatility enables supplying a product to meet nearly all individual requirements.

Scovill's list of customers reads like a "Who's Who" of the cosmetic, drug and toilet preparations industry. You also may find the use of this service profitable if your requirements fall within any of the groups mentioned above. Call or write any Scovill office, or in Canada, our Toronto plant.



This is a thin, double loose-powder vanity. Has snap-down cover for powder compartment. Can be provided with special finishes and decorative effects. Is only one of many Scovill vanity items.

S C O V I L L

MANUFACTURING COMPANY

Drug and Cosmetic Container Division

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Syracuse • Pittsburgh • Detroit • Chicago • Cincinnati
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SCOVILL ***for all types of metal—***

VANITY CASES • LIPSTICK CONTAINERS • ROUGE CASES • TALCUM POWDER CAN TOPS • LOOSE POWDER CONTAINERS • PERFUME AND LOTION BOTTLE CAPS AND CLOSURES • ATOMIZERS • CREAM-JAR CLOSURES DISPENSERS • INHALERS • EYEBROW-PENCIL HOLDERS • EYE-SHADOW CONTAINERS • MASCARA BOXES

SCOVILL

represented in fifth, eighth and ninth place. These were won by Park & Tilford's Faoen Gardenia perfume and face powder, B. & L. Laboratories Usa-Foam Bubble Bath, and Armin Varady's cream oil and powder.

STREAMLINED LISTERINE: For lo these many years the brown-paper-wrapped Listerine bottle which featured a cork, with cork-screw attached, when unwrapped, has been such a familiar part of the indus-

try's horizon, that we are tempted to permit an obituary note to creep into these remarks. Yes, the Listerine bottle has shed its paper wrapping and its corrugated liner and its cork. In its new, simple, streamlined form it appears as you see it here.

DUAL DEAL: Campana and Listerine entered into a cooperative deal and promotion arrangement by which Italian Balm, a 60-cent retailer, was offered with Listerine tooth powder, a 25-cent retailer, in a single carton to retail for 59 cents. The offer was only for the month of January and results of this first experiment by two major companies, are being awaited with interest. Campana Sales handled the deal which was widely advertised in magazines, newspapers and radio.

TRIAL PLUS REGULAR PACKAGE: The Padola company, marketing the new brushless shave by that name, just to prove that they're not fooling when they say "You Must Like It, Or Else Your Money Back" present the product in a package which makes it obvious that they mean what they say. The novel carton is constructed to house two jars—a small trial jar and the regular-size jar. This is another evidence of a package making the promotion possible.

ENSEMBLES AND FINGER BOWLS: Much has been said about the odor ensembling idea but so far, few manufacturers have taken advantage of this. Corday has decided to try it out with the most popular perfume of the line, Orchidee Bleue, and has created a complete collection of toilet essentials in this fragrance —face and dusting powder, lipstick, rouge, perfume and cologne.

Corday is also endeavoring to bring its perfumes right to the dinner table—how? Simply by suggesting that a few drops of cologne be added to finger bowls—it's an old South American custom, they say, and it sounds like a mighty good idea. The perfume should be added at the table so that the guests may enjoy it fully.

UNUSUAL SERVICES: Elsie M. Rushmore, New York, whose organization is well known to this industry as specialists in the management and analysis of contests, announce that two new services are offered this year. The first service consists in making a check-up on the acceptableness of any premium or group of premiums which a manufacturer may have under consideration. The second service consists in handling mass correspondence either for an individual or for an organization. This latter service is particularly valuable to an advertising agency or a manufacturer trying out a new radio program.

Handy as a DOOR KNOB...

EMBOSSED-TOP CORKS

- *Win Consumer Good Will*
- *Keep Your Product Fresh and Pure*

A TWIST and they're out! A tap and they're back in the bottle again! Armstrong's Embossed-Top Corks are time savers—and temper savers as well. They make tight, dependable seals, yet they are as easy to turn as a door knob. This feature, alone, accounts for a large measure of the popularity and good will they have won with countless users of drug and cosmetic products.

There's the protection feature, too, that manufacturers particularly appreciate. A cork seal is a sure seal that has stood the test of time. Bottled goods keep their freshness and purity when sealed with embossed-top corks.

Consider also the colorful decoration that Armstrong's Embossed-Top Corks give your package. Embossed in attractive two-tone color combinations with your name or trade-mark, they advertise the quality of your product—help make people want to buy.

These important features of Armstrong's Embossed-Top Corks will aid in building customer good will for your product. For complete details, samples, and prices, write Armstrong Cork Products Co., Closure Div., 913 Arch Street, Lancaster, Pa.

Armstrong's EMBOSSED-TOP CORKS

People Want Cows

One of the fondest pastimes of merchandising executives is that of trying to chart the impulses and reactions of the consumer. It is a disillusioning task. Human beings deny the pat definitions alike of sales executives and psychoanalysts.

Chart this one: an Associated Press dispatch from London reports the advent of high popularity for a box of chocolates when its cover design was changed from that of a pretty girl to a cow. "We just can't sell candy boxes with pictures of pretty girls on them," reports the perplexed candy maker. "People want cows."

There will be neither reaction charts nor bovine candy boxes at the Seventh Packaging Exposition and concurrent conferences of the American Management Association. But for the shrewd merchandising executive there will be what is of far more practical value: a vast fund of merchandising ideas, of the machinery, materials, supplies and services vital to successful packaging, packing and shipping. You will find it an illuminating and profitable event.

SEVENTH PACKAGING EXPOSITION

Hotel Pennsylvania · New York City

MARCH 23 - 26

VICTOR
PLASTIC
CAPS

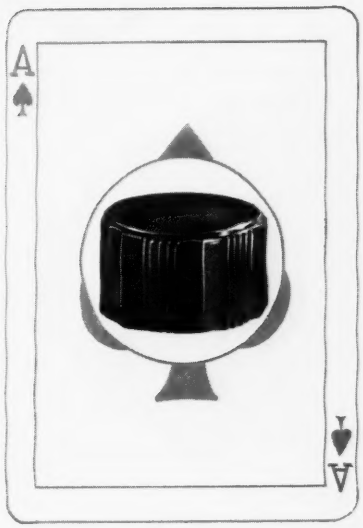
embody
The Dignity of a King
The Beauty of a Queen
The Strength of an Ace

Victor King Design

This closure with its graceful rounded crown and its obelisk side design, will add dignity to any container to which it is attached. Available in all sizes and colors.

A Victor Queen
(Private mould)

We show this beautiful 2-part cap to demonstrate our ability as masters in the art of making plastic closures. Have you ever seen a more exquisite closure than this cap in ivory and black? If you are interested in a cap for your exclusive use, consult us.



Victor Ace Design

The Ace closure, shown above, is tastefully designed with a decoration that affords an easy grip. You may have this closure in sizes from 8 to 15 and in all standard colors.

Located in the heart of the metropolitan district, close to the shipping terminals, we can make prompt deliveries to any part of the country. Protect yourself against shutdowns and delayed deliveries by placing your requirements in our hands.

Victor Metal Products Corp'n
196 Diamond St. Brooklyn, N. Y.

FOR DRUG & COSMETIC PACKAGES

FREE — Write for "Case Histories of Packaging". It contains interesting packaging data together with samples of many papers.

The Riegel Mills offer the widest range of packaging papers available from any one source today. No matter what your paper needs may be, we can either supply them efficiently and economically, or tell you who can. Write us your requirements.

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RIEGEL PAPERS

Give your product "LUSTRE"

a brilliant, rich Stanley Label will help it to "shining success"

See for yourself how much greater eye-appeal Stanley Labels have . . . yet how inexpensive they are. Metal or Foil. Write for interesting samples.

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Dayton, Ohio

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Room 913, 200 Fifth Ave.

Chicago
714 Westminster Bldg.
110 S. Dearborn St.

St. Louis
1341 Syndicate Trust Bldg.

Kansas City
500 Fidelity Bank Bldg.

Los Angeles, Maxfield Bldg.

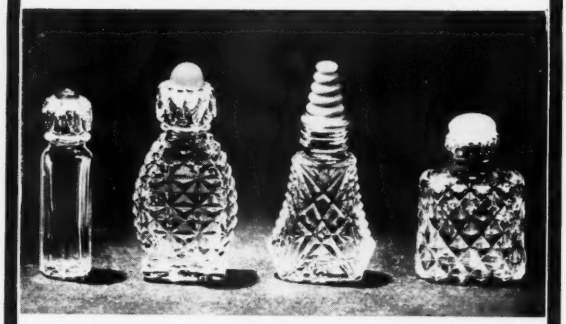
STANLEY *Metallic Seals and Labels*

ENTIRELY NEW
Dispensing Bottles
and
Closure Service

TEN NEW TYPES OF ORIGINAL CLOSURES

Pearls — Metal Filigree — Carved Catalin
Gems — Plastic — Metal

Newly Styled Dispensing Bottles—Half Dram and One Dram



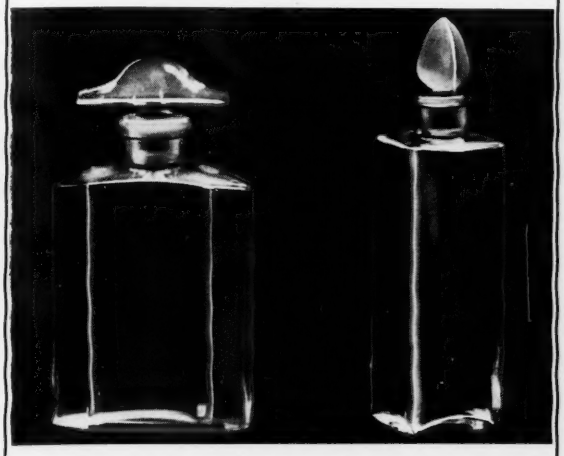
SURPRISINGLY LOW PRICED
Write for sample line of vials and closures with complete price and packing details.

GEO. W. BUTTON, CORP.
347 Fifth Ave., New York, N. Y.

ARTISTIC

Imported Perfume Bottles

will stimulate and greatly increase the sale of your Perfumes.



★ FINEST OF CRYSTAL ★ MODERN STYLES
★ HIGHLY POLISHED ★ FULL-CUT

SPOT STOCKS — IMPORTS — PRIVATE MOLDS

At Prices Surprisingly Low

THE SUDBURY COMPANY

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Visit our Showrooms and view the Largest Collection in America

With Distinct Pleasure
We Announce the Publication of

How To Sell Cosmetics

by **Edyth Thornton McLeod**

This book was written to help those who have actual sales contacts with the consumer.

Manufacturers, department stores, chain store organizations, cosmetic salesgirls, beauty parlor operators, independent retailers of cosmetics, and beauty schools will find this book invaluable in their work.

It will more than pay for itself in the benefits which should result from its study and the application of the helpful, practical everyday selling help contained in it.

Single copy price $2.00
Five or more copies $1.50 each
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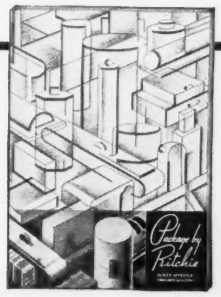
The Drug and Cosmetic Industry
101 W. 31st St. New York City

But the Last Place in the World You Want YOUR Product to Be

There's a spot like this in every store. Usually it's down at the bottom of the show-case or off in a corner. A quiet, cozy, peaceful little nook that few people see — where few people go — where the products that "move too slowly" are kept.

Let Ritchie help you to keep YOUR product out where people can see it — reach for it — out where the *sales* are made. A Ritchie designed package gives your product real display value. It helps to secure dealer cooperation — prompts consumer demand!



WRITE FOR THIS BOOKLET

It will give you a new appreciation of modern packaging, and new ideas about point-of-sale merchandising. It discusses clearly the important factors of modern package design: and tells you how you can take advantage of Ritchie's unusual designing facilities.

W. C. RITCHIE AND COMPANY

8847 BALTIMORE AVENUE, CHICAGO

New York Philadelphia Detroit Minneapolis
Cincinnati Los Angeles St. Louis Ft. Wayne

BOTTLES and JARS

- A full line of bottles and jars always in stock for immediate delivery.
- Available in small or large quantities. Jars: Clear, Opal or Colored, in all standard sizes—any quantity from stock.
- Perfume bottles, standard moulds or special design.
- Lotion bottles—many very attractive designs for your immediate use.
- Bottles and jars with and without caps. Let us quote on any size order for any type of bottle or jar.

HAGERTY BROS. & CO.
10 PLATT ST., NEW YORK CITY

COSMETIC COMPANY
803 Summer St.
BOSTON, MASS.

PRIVATE BRAND MANUFACTURERS

•

FACE POWDERS
and
CREAMS
Our Specialty

•

We are COMPLETELY EQUIPPED to PRODUCE, PACKAGE and SHIP your merchandise

Let's SWAP:

Reliable drug and cosmetic manufacturer will consider trading the following quality items:

FACE POWDERS
DENTAL POWDERS
DUSTING POWDERS
MEDICATED CREAMS
DENTAL & SHAVING CREAMS
CARTONS FOR DENTAL & SHAVING CREAMS

---in exchange for---

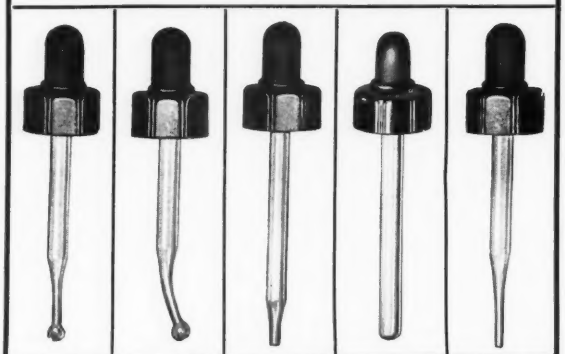
NEW BOTTLES
RAW MATERIALS
FINISHED MERCHANDISE
MACHINERY & EQUIPMENT

Prefer trading for new bottles but will consider other propositions. Write complete details. All letters held in strict confidence.

BOX 576

THE DRUG AND COSMETIC INDUSTRY
101 West 31st Street New York, N. Y.

PROMPT DELIVERIES
UP-TO-DATE DROPPER FITTINGS
PATENTED NON-FRICTIONAL FIT



2200	2205	2210	2250	2220

These five items have Bakelite caps (available in standard brown or black) . . . patented design rubber nipple furnished in any color. All caps and nipples may be had with any style glass pipette shown, and in any size. Nos. 2200 and 2205 are safety ball end finish pipettes for eye use. The common straight or curve pointed pipettes are for nose drop and other uses. Write for samples and prices.

WE CAN SUPPLY ANY SPECIAL ASSEMBLY WANTED

GLASS PRODUCTS CO.
GLASSWARE
VINELAND ● NEW JERSEY

ATLANTA, GA.: Warren M. Curry, 2895 Peachtree St.
NEW YORK: L. A. Barber, 74 S. Portland Ave. Brooklyn, N. Y.
CHICAGO, Ill.: E. Marx & Co., 308 Washington St.

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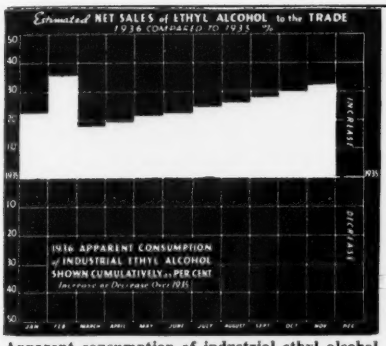
ALCOHOL NEWS

February ★ A Monthly Series of Technical Articles for Chemists and Executives ★ 1937


Estimated NET SALES of ETHYL ALCOHOL to the TRADE
1936 COMPARED TO 1935 %
INCREASE
DECREASE
1936 APPARENT CONSUMPTION of INDUSTRIAL ETHYL ALCOHOL SHOWN CUMULATIVELY in PER CENT
Increase or Decrease Over 1935

Apparent consumption of industrial ethyl alcohol from Jan. 1 to Nov. 30, 1936, was 68,870,000 wine gallons. This is 33.0 per cent greater than during the same period in 1935 when 51,757,000 wine gallons were consumed.

U. S. I. DEVELOPS NEW SAMPLE CONTAINERS

When U. S. I. introduced its striking new container for shipping liquid samples recently, the search for the elusive bottle through piles of sawdust in the bulky, desk-scratching, wooden box became a thing of the past. For many years chemical buyers have been awaiting a compact and modern sample shipping container which could be opened on a desk along with routine mail.

Although essentially a simple design, much tedious research was necessary to devise a package which would be practical and could be sent by parcel post.

From four ounces to quart samples of many U. S. I. products may be mailed readily in glass bottles in the new packages, thus materially reducing transportation charges and the costly shipping boxes. A light, metal can with a safe, triple-tight seal replaces the old unwieldy box. Instead of the messy sawdust which has plagued recipients heretofore U. S. I. uses a highly-absorbent cellulose filler to protect the bottle.

An attractive utility label, decorated with green and white stripes, lists U.S.I. products. By means of a novel design one label may be adapted to fit the 4-oz., 8-oz., pint and quart size containers.

EXTRACT VITAMIN C FROM PINE NEEDLES

Of interest to vitamin manufacturers is the work of two Russian chemists on the extraction of Vitamin C from pine needles. According to reports, they concentrated a water extract of Vitamin C to 40-43° Be. by heating without boiling. This solution had good stability and it was possible to remove the bitter tar-like and aromatic bodies with a solution of 2 parts of ethyl alcohol and one part benzene. Addition of 1½ to 2 volumes of 70% alcohol to one volume of concentrate was sufficient for clarification.

It was observed that samples of needles collected in Spring had three times as much Vitamin C content—about 0.3%—as those collected in August. It was also noted that steaming increased the stability of the vitamin.

NEW TECHNIQUE TO ESTIMATE ALCOHOLS

Authors Say Method Gives Rapid Determination of Monohydric Alcohols and Glycols

Precipitation of the xanthogenate and subsequent titration with n/10 iodine is a technique reported from abroad, for analyzing saturated alcohols and glycols. The method depends upon the reactions

$$ROH + CS_2 + KOH = RO.CS.SK + H_2O$$
$$2\ RO.CS.SK + I_2 = (RO.CS.S)_2 + 2KI$$

The xanthogenate is prepared by boiling the alcohol with an approximately equi-molecular quantity of powdered potassium hydroxide. When the potash is dissolved and the solution is cool, 1½ parts of carbon disulfide is added to precipitate the xanthogenate.

This precipitate is purified by washing twice with ether, dissolving in hot alcohol or acetone, after which it is again precipitated with ether. From 0.15 to 0.25 grams of the dried xanthogenate are exactly weighed, dissolved in 200 ml. of water and titrated with n/10 iodine.

The authors state that the method is not applicable to the determination of tertiary alcohols nor the differentiation of isomers.

W. J. FRIED SUCCEEDS HARRISON

Walter J. Fried, well known in industrial alcohol circles, has been appointed to succeed Paul Harrison as Manager of Alcohol Sales of the New York Division.

Formerly Assistant Manager of USI's Eastern Alcohol Sales, Mr. Fried assumed his new duties on Jan. 1 when Mr. Harrison retired.

Executives in the drug, chemical and cosmetic industries will meet in New York City on Thursday, March 4th, for the Twelfth Annual Drug, Chemical and Allied Trades Banquet.

STUDY BEAUTY AID BUYING BY WOMEN

Survey Indicates Over 94% Use Face Powders, 30% Use Depilatories; Alcohol Basis of Many Items

What does a woman buy when she enters the beauty department of a store? How much of her money goes for the purchase of powder, lipstick, hand lotion, deodorants or countless other beauty aids?

These and similar pertinent questions have engaged the attention of merchandisers and manufacturers everywhere. Perhaps one of the most informative series of answers has been tabulated in a survey now available in the book, "Faces and Figures," published recently.

Replies From 1200 Women

With findings based upon the replies of over 1200 women scattered throughout the country, the survey gives the following tabulation which shows the percentage of women using various preparations:

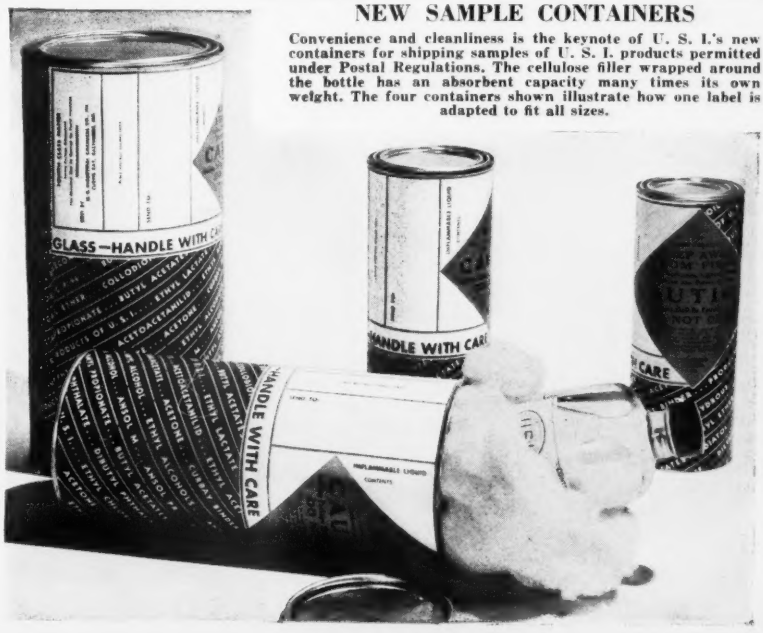
	Per Cent
Face Powders	94.3
Lipstick	93.7
Hand Lotions	90.9
Home Facials	90.8
Manicure Items	89.4
Face Creams	88.6
Skin Tan	88.0
Rouge	87.0
Deodorants	87.0
Powder Bases	80.0
Face Lotions	77.0
Reducing Items	73.7
Shampoos	72.9
Hair Removers	30.0

Most of the women in the group questioned were in the younger age brackets with approximately 57 per cent in years from 18 to 25; 30.4 per cent from 26 to 35;

(Continued on next page)

NEW SAMPLE CONTAINERS

Convenience and cleanliness is the keynote of U. S. I.'s new containers for shipping samples of U. S. I. products permitted under Postal Regulations. The cellulose filler wrapped around the bottle has an absorbent capacity many times its own weight. The four containers shown illustrate how one label is adapted to fit all sizes.



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February ★ **ALCOHOL NEWS** ★ 1937

A. I. Ch. E. Committee Report Urges Constant Vigilance Against Detrimental Industrial Alcohol Legislation

When more than forty state legislatures as well as Congress convene during 1937, "bills either threatening the status of . . . or contriving . . . to restrict the scientific and industrial uses of the chemical, alcohol" may be introduced, it was pointed out in the report of the Committee on Industrial Alcohol to the 29th annual meeting of the A. I. Ch. E.

Emphasizing the importance of maintaining the closest cooperation between producers, users and federal authorities to make secure alcohol's role as a vital raw material in industry, the Committee stressed a policy of steadfast vigilance against such legislation. Quoting the report,

"It is not to be supposed that the industrial alcohol situation is ever static. . . . While there have been several court decisions holding that Title III of the National Prohibition Act survived repeal, it was not until liquor law repeal and enforcement Act of August 27, 1935, that such survival was recognized by statute. Its continuance was also insured by H. R. 9185. The extent to which alcohol is a subject of continuing interest is shown by the second edition of 'Alcohol Under State Liquor Laws', compiled by Captain James P. McGovern, general counsel of the Industrial Alcohol Institute."

That technical men, with a wide knowledge of how alcohol functions in industrial processes, can aid in steering the industry clear of some of these legislative shoals is a conclusion of the report.

BRUSHLESS SHAVE CREAMS DULL RAZOR BLADES?

Shaving cream is an important factor in the effective life of razor blades, according to one investigator. He reports that brushless creams dull blades more rapidly than brush-type and places the blame on their pH value.

Tests of commercial brushless creams revealed a pH of 7.2 while the brush-type had 9.4. Since oxygen corrosion of steel occurs readily at a pH of 7.2 but is appreciably retarded at 9.4, the theory was formulated that the alleged dulling is due to corrosion during shaving.

Potassium chromate was added to a sample of brushless shaving cream to retard this corrosion. Five men, using different makes of razors, reported from 50 to 200 per cent more shaves when using the chromate-treated cream.

W. W. Davis, nephew of the late James A. Webb and salesman for the U. S. I. subsidiary, James A. Webb and Son, for 56 years until his retirement in 1934, died Jan. 12 at his home in Madison, N. J. Mr. Davis was born Feb. 11, 1861.

STUDY EXPENDITURES BY WOMEN FOR BEAUTY AIDS

(Continued from preceding page)

8.3 per cent from 36 to 45; and 4.3 per cent were 46 or over.

In February of 1936, the classified average expenditures of women in the group were:

For care of the hair	$2.82
For care of the face	$2.29
For care of the hands	$1.15

These tabulations also provide an indirect index of how extensively industrial ethyl alcohol is employed by users of beauty aids. Practically every product in the list utilizes alcohol either as a solvent or as a chemical. Here is food for thought that should focus attention on the desirability of using a large volume of alcohol to stimulate a wider sale for items in the lower sales classifications.

In particular may be mentioned deodorants, powder bases, face lotions and shampoos whose sales lag behind those of lipstick and hand lotions. The deodorant market, it is evident, has not realized its full potentialities. With greater promotion, it seems reasonable that its sale can be extended to a wider circle of women and to a sizeable portion of the men's market.

The use of liquid powder bases is still not fully appreciated by women at large. A good portion of this market still goes to various creams, and women still need to be educated to a better appreciation of the virtues of the powder base.

Shampoos have been vastly improved in recent years and their ultimate market has tended to widen, but still greater promotion is needed. When this is done, it should be kept in mind that alcohol is an indispensable aid in capturing greater sales.

J. W. DUNN RETIRES

Known for many years as Number One salesman for Industrial Alcohol in the middle west, John W. Dunn, Detroit Division Manager of the U. S. Industrial Alcohol Co., retired January 1, 1937 after 18 years of loyal service. Just prior to Mr. Dunn's retirement, Mr. Fred Henley of the U. S. Industrial Alcohol Co.'s Chicago office sales staff was promoted to succeed him.

TECHNICAL DEVELOPMENTS

Excellent detergent action is claimed for a new compound developed recently. The material is also credited with the ability to form stable emulsions of water and oils. It is a neutral, free-flowing liquid with a solids content of 85 per cent.

U S I

Portable mixers, equipped with totally enclosed, air-jacketed and explosion-proof motors have been perfected according to the recent announcement of a manufacturer. It is said that they may be used on inflammable batches in hazardous locations or over steaming kettles, jacketed tanks and other receptacles which throw off steam and acid fumes.

U S I

A wax with a free cholesterin content of 33 per cent and 7 per cent combined cholesterin has been announced recently. It is reported to be derived from lanolin. As little as one-half of 1 per cent imparts a nourishing effect to creams and lotions, according to the manufacturer.

U S I

A moving pipe conveyor recently introduced has a rubber pipeline which travels with the material from feed to discharge. The manufacturer claims that any number of directional changes can be made, and wet and dry solids handled.

U S I

A higher fatty alcohol base for the manufacture of hair preparations was introduced recently. Preparations made from the base dissolve clear in cold and hard water, clean the hair and scalp thoroughly, but do not defat the hair and skin to such an extent that scalp irritations develop, the manufacturer reports.

U S I

Oval-shaped test tubes, now on the market, are said to improve the technique for making Agar slants. The tube manufacturer states that a much larger area for growing cultures is provided by an equal amount of culture medium and that the culture can be examined under the low power of the microscope.

U S I

Cellulosic lacquers may be removed from the skin with a water-rinsable detergent composition recently patented. It is described as a complex mixture of ester solvents, soap, glycerine, abradant material and a chlorinated hydrocarbon blending agent.

U S I

A new liquid coating material is said to form a heat-resisting, flexible film on metallic, glass and other surfaces. The maker states that the material is suitable for coating the inside of metal containers, collapsible tubes, etc. The coating can be applied by brushing, spraying or spreading.

A folder giving the history of industrial alcohol, its industrial uses, a pictograph of alcohol manufacture, and a summary of government regulations may be secured by writing to U. S. I.

U.S. INDUSTRIAL ALCOHOL CO.

WORLD'S LARGEST PRODUCERS OF INDUSTRIAL ALCOHOL

ETHYL ALCOHOL

SPECIALLY DENATURED-*All Formulas* • COMPLETELY DENATURED-*All Formulas* • ANHYDROUS-*Denatured* • ABSOLUTE-*Pure*

SOLOX-*The General Solvent* • U. S. I. DENATURED ALCOHOL • SUPER PYRO *Anti-Freeze*

PURE (190 PROOF) TAX PAID—TAX FREE

U. S. I.—U. S. P.-*Ethyl* • WEBB'S-*Ethyl*

Executive Offices: 60 East 42nd Street, New York, N. Y. Branches in all Principal Cities.

NEWS

Associations

Drug Dinner Plans

Arrangements for the Twelfth Annual Banquet of the Drug, Chemical and Allied Trades Section of the New York Board of Trade are now in full swing. Joseph A. Huisking, Chairman of the Section reports that reservations are coming in at a rate that makes it appear certain that this year's dinner will top all others in point of attendance. Joseph M. Wafer, of Industrial Chemical Sales, Chairman of the Reception Committee, states that all the members of the Reception Committee will be on hand at the general cocktail party preceding the banquet to introduce those in attendance to one another. All the members of the Reception Committee will wear badges, and anyone in attendance who is looking for anyone at the dinner should approach a member of the Reception Committee and ask for an introduction.

JOSEPH A. HUISKING

R. D. Keim, of E. R. Squibb & Sons, Chairman of the Program Committee, announces that the banquet will start promptly at 7.30 instead of 8.00. This is one-half hour earlier, and those attending the dinner should arrive earlier than in other years if they want to spend the same amount of time in contacting people before the dinner. Mr. Keim has been very busy for some time arranging the program for the dinner, and reports that he has many interesting innovations which he will keep as surprises. From those who are acquainted with Mr. Kein's plans, the impression comes that the program will be quite different than in other years, and will meet with wide approval.

Tickets for the dinner are priced at $8.00 each, and reservations should be sent to Ray Schlotterer, 41 Park Row, New York.

Foragers' Dinner

The Foragers of America held their thirty-eighth annual banquet, at the Hotel Astor, New York, on January 9. W. W. Neilson, the newly elected president, presided and introduced as toastmaster Frank L. Graham. The latter welcomed the members, and their guests to this, the thirty-eighth meeting, and called upon three of the founders of the Foragers, who were present, to take a bow. They were O. C. Niedenstein, A. G. Niedermeyer, and R. A. White. He also introduced the youngest member of the Foragers, Leonard Schultes.

After the calls of "We want Grandpa" had subsided, movies of the last several outings of the Foragers were shown and everybody had a chance to see themselves in—and out of—action. The evening, and a highly successful banquet, closed with a program of entertainment which had been provided by the committee under the chairmanship of A. J. Connolly, secretary-treasurer.

Lichtenberg Heads A.C.S.

The nominating committee of the Chemical Salesmen's Association has proposed the following officers to take office March 1: president, Charles Lichtenberg of Commercial Solvents Corp.; vice-president, Charles E. Kelly of Hagerty Bros. & Co.; secretary, DeWitt Thompson of Mathieson Alkali Works; treasurer, J. M. Wafer of Industrial Chemical Sales Co. They have also proposed the following to serve on the executive committee for three years: A. A. Wasserscheid of Mallinckrodt Chemical Works and W. D. Merrill of Joseph Turner & Co.

Wolff Heads Michigan Assn.

At the annual meeting of the Allied Drug and Cosmetic Association of Michigan held in Detroit, the following officers were elected: president, Joseph M. Wolff, director of manufacturing for Frederick Stearns & Co.; vice-president, G. Carlisle

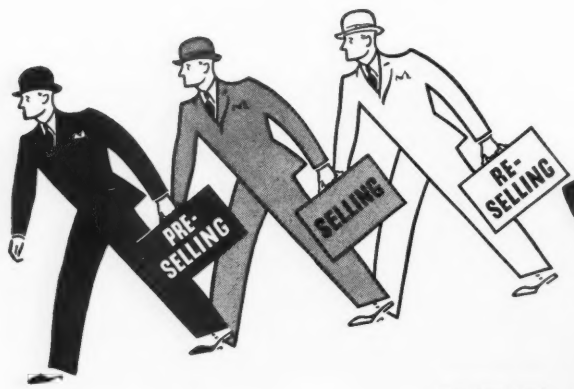
JOSEPH M. WOLFF

of C. E. Jamieson & Co.; secretary-treasurer, M. G. de Navarre. Other members of the executive committee are A. R. Vicary of the Mark W. Allen Co.; C. E. Janieson of C. E. Jamieson & Co.; O. W. Wegner of Nelson Baker & Co. The chairman of the entertainment committee is Wilbur Elliott of the Elliott Sales Service and the chairman of the membership committee is Karl Senff of Frederick Stearns & Co.

Hanshaw Heads Chicago Assn.

The Chicago Perfumery, Soap & Extract Association has elected the following officers for this year: President, T. E. Hanshaw; vice-president, W. Kedzie Teller; secretary and treasurer, Martin B. Vance.

BIGGER VOLUME WITH THESE 3



IN OWENS-ILLINOIS *Sales*PACKAGES

● Whether it's proprietaries, cosmetics, lotions or a host of other popular drug store products, the requisites of a *complete* selling job are *PRE-SELLING, SELLING* and *RE-SELLING.* Owens-Illinois packages have proved a distinct aid in all three phases of *complete* selling.

If you want to be sure that your container is a *Sales*package, place your entire packaging problem in the hands of Owens-Illinois. Containers, closures, labels and cartons created by Owens-Illinois go to market backed by years of experience in producing *Sales*packages. Many types of stock molds are available. Owens-Illinois sales offices are located in most principal cities. . . Ask for full details. . . Owens-Illinois Glass Company, Toledo, Ohio.

OWENS-ILLINOIS
Containers and Closures

ROYAL
THE SalesCAP
PLASTYLE (molded)—Helping produce and maintain sales for many popular medicinals and proprietaries.

The Royal Oval
Design Pat. No. 85925

Norman Heads Cal. Assn.

The following officers have been elected for this year by the California Cosmetic Association: President, Andrew Norman, Merle Norman; 1st vice-president, F. A. Fetsch, Calif. Cosmetic Corp.; 2nd vice-president, William Nassour, Castilian Products; secretary, Davis Factor, Max Factor Co.; treasurer, Louis Herzberg, Moon Glow Cosmetics; trustees, D. S. Cowling, Gene Palmer Co.; W. R. Schmidlapp, Shor Laboratory; E. J. Schmitz, Kays Cosmetics; H. Horsfall, Ivor of Hollywood.

Consulting Chemists Assn.

The Association of Consulting Chemists and Chemical Engineers, New York, have issued the third edition of its directory of association members. The list contains details about the work which the members are prepared to undertake.

Armstrong Heads Oil Dealers

The Essential Oil Association of the United States elected the following officers: President, A. D. Armstrong, of Fritzsche Bros.; vice-president, H. C. Ryland, of H. C. Ryland, Inc.; secretary, F. W. Stichweh, of James B. Horner & Co. The executive committee will be composed of the officers mentioned above and F. Webber of George Lueders & Co., and Kenneth Voorhees of Ungerer & Co.

Drug World's Fair Bonds

William C. Watt, vice-president of the Liggett Drug Co., Inc., and chairman of the industry's volunteer bond sales committee for the New York World's Fair, has announced that Dr. Mendel Nevin, president of the Novocol Chemical Manufacturing Co., Inc., has accepted the appointment as vice-chairman of the drug industry committee, heading the distribution of the debentures in Brooklyn. Dr Nevin launched the Brooklyn campaign by purchasing $11,000 of debentures for his company and members of his family.

Pharmaceutical Titles

"Standardized Titles and Formulas of Pharmaceuticals in General Use," a publication compiled by the Committee on Catalogue Simplification of the American Drug Manufacturers' Association, has been revised and is now ready for distribution.

The purpose of the codification is to standardize titles and formulas of regularly listed pharmaceuticals (not specialties) to the end that all manufacturers will list preparations of the same formulas under identical names or titles, and avoid the use of different formulas or strengths under a given title.

Many preparations for which there is no longer an active demand have been eliminated, and others, where unimportant variations from the more generally accepted or standardized formulas exist, have been harmonized with the standards.

The book is in loose-leaf form with pages 9¼" x 6," bound together in a flexible black binder, with the title in gold letters. The price of the publication delivered in the United States is $3.25. Check made payable to the American Drug Manufacturers' Association, should accompany order.

People

Kilcullen With Rallet

W. T. Kilcullen, has become associated with the Rallet Corp., as sales representative. He started his business career in this filed in the old days with Park & Tilford, and later was connected with Guerlain and then with Peggy Sage, as vice-president. For the past six years, he has been with Ybry.

C. L. Speiden Resigns

C. Leith Speiden, associated with Innis, Speiden & Co., since his graduation from Cornell in 1915, has resigned his active connection with that company.

Egan Appointed Manager

Harold J. Egan, associated for over twenty-five years with Coty, Inc., and its affiliated companies, has been appointed manager of Marie Earle, Inc., and Rallet Corp. of America.

McMonies Retires from Searle

T. L. McMonies of G. D. Searle & Co., Chicago, retired the first of January after forty-eight years of service with the company where he had been pharmaceutical laboratory superintendent.

Dieterich—Mennen Merchan. Mgr.

F. S. Dieterich, for the last four years director of advertising and sales promotion for the Mennen Co., Newark, N. J., has been appointed merchandising manager of the company. In this new post he will be director of sales as well as director of advertising and sales promotion.

Charles L. Huisking Abroad

Charles L. Huisking, president of Chas. L. Huisking & Co., accompanied by Mrs. Huisking, sailed for Europe January 13 on the Washington. The trip is primarily in connection with the cod liver oil situation in Norway, the season's production just having started when he sailed. Mr. Huisking went first to England, visiting his London office and other English connections. After leaving Norway, he planned to go to Germany, returning to New York about February 20.

Zollinger Heads Tombarel Company

The association of L. J. Zollinger for the past five years as vice-president and manager of the New York office of Albert Verley, Inc., has terminated, and Mr. Zollinger will hereafter devote his entire time to the products of Tombarel Freres in which he has specialized during such association.

A new company has been organized in New York under the name of Tombarel Products Corp., with Mr. Zollinger as president and general manager and this corporation will act as the exclusive representative for the sales of the products of Tombarel Freres of Grasse, France; and, it is announced, will also manufacture and deal in a general line of materials for perfume, soap, and cosmetic manufacturers. The new company has also acquired the business, good-will, and trade-mark of Robert Freres of Grasse, France, for the United States of America, Canada and Cuba. Tombarel Products Corp. has taken quarters at 9-11 East 19 St., New York.

Arrangements have been made between Tombarel Freres, the Tombarel Products Corp. and Albert Verley, Inc., for the latter to continue to supply certain of its customers with products of Tombarel Freres as in the past.

A. J. Dedrick, who has been associated with Albert Verley, Inc., for the past seven years has been appointed to the position of manager of the Verley New York office and will remain in charge to serve their many friends in the East.

Albert Verley announces the removal of their Chicago office to their new home at 1621-25 Carroll Ave., Chicago, where increased facilities will make it possible to expand their position in the field of perfume compositions, as well as rare and special chemical aromatics in which this house has achieved outstanding success. Subsequent releases from the House of Albert Verley, Inc., will reveal more detailed facts of their new plant and quarters and added facilities to serve the trade.

Sharp & Dohme Advances Dempsey

John S. Zinsser, president of Sharp & Dohme, has appointed William L. Dempsey as assistant to the president. For the past year Mr. Dempsey has been acting as a consultant to the company in sales and advertising.

J. & J. Expands

Johnson & Johnson, Ltd., Montreal is planning to add another story to its plant at 2155 Pie IX Boulevard.

Johnson & Johnson, New Brunswick, N. J., has announced that it will begin construction of a new plant in Buenos Aires. The plant is expected to be in operation in about six months.

Dinner to J. L. Hopkins

The employees of J. L. Hopkins & Co. gave a surprise party on January 13 for Jesse L. Hopkins, founder and president of the company at the Drug and Chemical Club. The occasion was the forty-seventh anniversary of the founding of the company. A wrist watch was presented to Mr. Hopkins to whom the party was a complete surprise. The affair was managed by Walter Bott, purchasing agent of the company and was attended by forty-seven employees and guests.

Kammer Resigns

A. F. Kammer, vice-president and for many years manager of the New York office of Carr-Lowrey Glass Co., has resigned his position with the company. Mr. Kammer was the creator of many successful packages and has been known for his reliance upon the practical sales producing value of design and quality. Plans for the future have not been announced by Mr. Kammer, but his many friends wish him success in any undertaking.

Harrison Resigns

John G. Harrison, founder, and for several years president of the Harrison Refining Company, has announced his resignation from that company recently affiliated with American Cynamid & Chemical Corp.

Companies

Christy to Sell Rouges

R. T. Christy has announced that Christy Cosmetics, Inc., has resumed the distribution and sale of Christy lipsticks and rouges. The new address is 512 Fifth Ave., New York. For the past year and a half the distribution of these products has been handled by Pacquin Laboratories, Corp., and Mr. Christy has been active in the laboratory, improving products, developing new ones, designing new packages and developing new merchandise items.

McClenaghan Forms Dermique

William McClenaghan, prominent in the toilet goods business for twenty-five years, has formed Dermique, Inc., with offices at 420 Lexington Ave., New York. The company is acting as exclusive agent for Elizabeth Marie, of Philadelphia, featuring the product "Beauty Sleep."

Mr. McClenaghan started his toilet goods career with Wm. B. Riker Sons Co. Drug stores, where he was associated with Charles Welch. Mr. McClenaghan and Mr. Welch moved to Park & Tilford within a few months of each other in 1910, Mr. McClenaghan being an inside man at first and later general sales manager under Mr. Welch who became general manager of

the Wholesale Perfumery Department. At that time Park & Tilford were headquarters for almost anything imported in the toilet goods line.

To these two men goes much of the credit for building the sale in this country of some well-known lines. When Houbigant opened its own agency in this country, Mr. McClenaghan succeeded Mr. Welch as general manager in Park & Tilford, later introducing the Guerlain line in this country for Park & Tilford, and discovering Louis Philippe with his now famous lipsticks and rouges. He remained with Park & Tilford for fifteen years, later organizing the Menton Perfumery Corp., distributors of Veolay Perfumery of Paris. More recently he introduced Delv, which was sold to Primrose House.

Hausheer Resigns from Pepsodent

W. E. Hausheer, for the last sixteen years export manager for the Pepsodent Co., has severed his connection with that company to open his own foreign sales service. The new company which will specialize in the distribution of toiletries and pharmaceuticals, will be known as the Export Corp. The offices of the company are located at 737 N. Michigan Ave., Chicago.

Stokes Ad Manager

The F. J. Stokes Machine Co., Philadelphia, has announced the appointment of Howard M. Buckman as advertising manager. Mr. Buchman is vice-president of the Roland G. E. Ullman Organization, Philadelphia.

Pfaudler Sales Changes

The Pfaudler Co., Rochester, N. Y., announces that H. I. Edwards, who has represented the company in Michigan for several years, has been transferred to the New York office which office is in charge of J. J. Hickey. P. A. Laird, formerly of the Rochester branch of the company, has assumed representation of the company in the State of Michigan.

Metal Glass Products in N. Y.

Metal Glass Products Co., Belding, Mich., has announced the opening of sales and distribution offices and showrooms at Room 701, Commerce Bldg., 155 East 44th St., New York. The entire eastern division of the company is to be responsible to this new office which is under the management of A. C. Colgin, long associated with the firm as general sales manager.

On display at the new showrooms is the complete line of glass lined and stainless steel tanks and mixers offered to the drug, cosmetic and other industries.

SURPRISE DINNER TO J. L. HOPKINS

THE MAN WHO IS NEVER SATISFIED

He is called Chief Chemist. His office is in the laboratory. At any hour of the day or night you may find him in the factory, filling, or packaging rooms. He is ever eager to improve quality and production. He is persistent—never satisfied.

He is the type of man who inspired the J. T. Baker Chemical Co., after thirty years of producing C. P. Analyzed Reagents for laboratory testing, to turn their attention to supplying pharmaceutical houses with fine chemicals—measured purity by the ton.

The J. T. Baker Chemical Co. is grateful to this type of man—for his help and inspiration. A large number of such men, representing some of the finest pharmaceutical manufacturers, have in turn expressed their appreciation to Baker for making available truly *fine chemicals with emphasis on maximum purity rather than minimum standards of* purity.

If your Chief Chemist is never satisfied, it will pay you to investigate Baker's Fine Chemicals. See the Baker salesman the next time he calls. You will find him a worthy representative reflecting the spirit of the entire Baker organization.

J. T. BAKER CHEMICAL CO., Phillipsburg, New Jersey

NEW YORK
420 Lexington Avenue

PHILADELPHIA
220 South 16th Street

CHICAGO
435 North Michigan Ave.

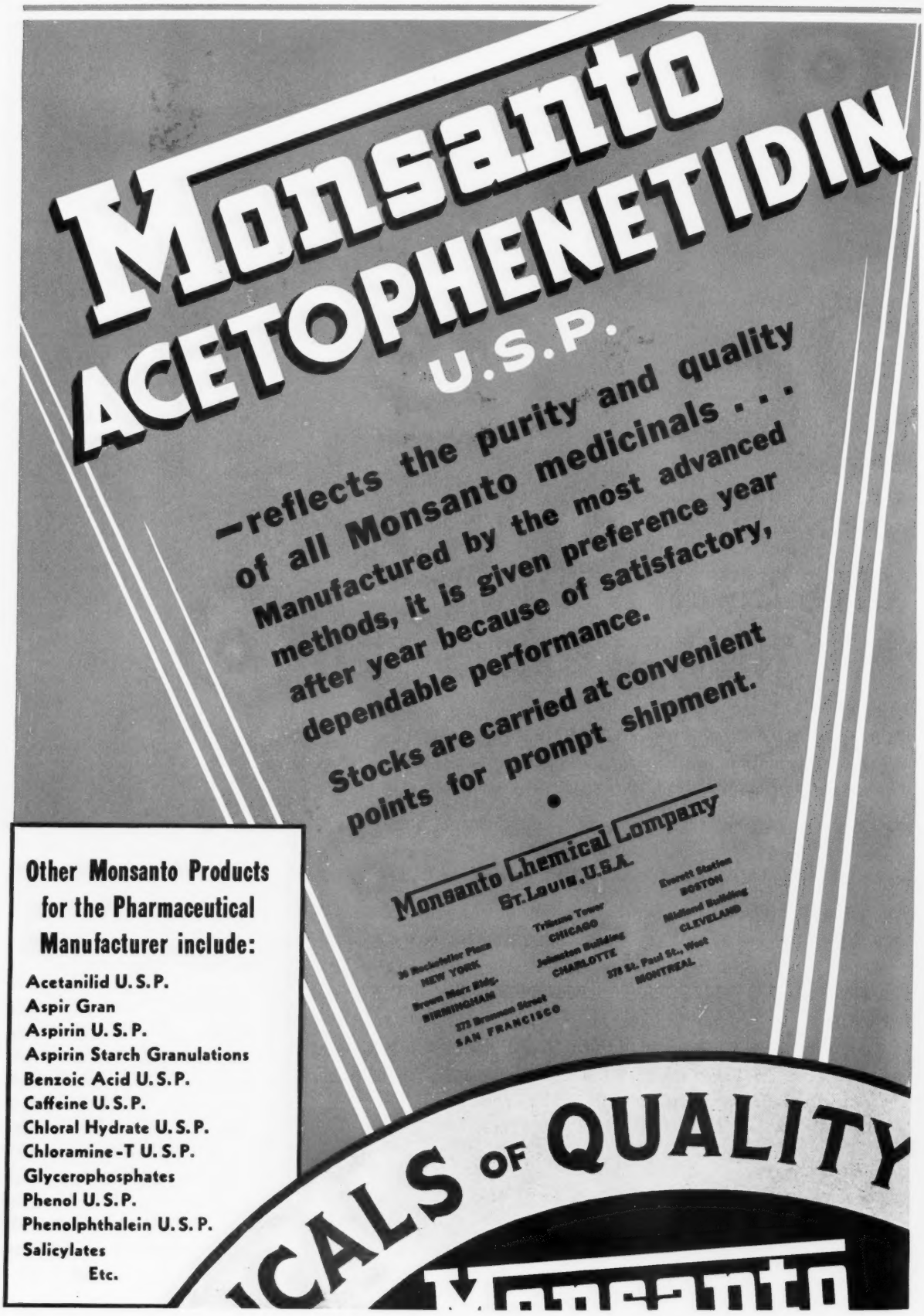
ANALYZED REAGENTS Baker's FINE CHEMICALS

A partial list of Tonnage Fine Chemicals held under rigid control, at no price premium.

Alkali Bromides
Potassium Iodide
Magnesium Oxide
Cream of Tartar
Bismuth Subcarbonate—
Subnitrate and other Salts
Caustic Potash and Soda
Sticks and Pellets
Rochelle Salt
Lead Acetate
Salicylates

Baker's fine chemicals

for Pharmaceutical Manufacturers


Monsanto
ACETOPHENETIDIN
U.S.P.
—reflects the purity and quality of all Monsanto medicinals . . . Manufactured by the most advanced methods, it is given preference year after year because of satisfactory, dependable performance.
Stocks are carried at convenient points for prompt shipment.
Monsanto Chemical Company
St. Louis, U.S.A.
Other Monsanto Products for the Pharmaceutical Manufacturer include:
Acetanilid U.S.P.
Aspir Gran
Aspirin U.S.P.
Aspirin Starch Granulations
Benzoic Acid U.S.P.
Caffeine U.S.P.
Chloral Hydrate U.S.P.
Chloramine-T U.S.P.
Glycerophosphates
Phenol U.S.P.
Phenolphthalein U.S.P.
Salicylates
Etc.
CALS OF QUALITY

M.M.&R. Sales Meeting

The annual meeting of the entire staff of Magnus, Mabee & Reynard, Inc. was held January 5 to 8 at the company's offices in New York. The meeting started with welcoming talks by Percy C. Magnus, president and W. F. Fischer, sales manager, and was followed by a discussion of perfume oils. At one of the sessions, Walter Cooper, one of the M.M.&R. technical experts, read a paper on balsams. Other talks on grass oils and the more important essential oils were the subject of talks by A. H. Downey, head chemist, and members of his staff. Foreign markets were analyzed and the firm's export business were discussed by F. G. Robin. Advertising plans for 1937 were outlined in detail by Sidney Matthew Weiss. On the third day of the meeting, Dr. A. R. Bliss, Jr., dean of Howard College, School of Pharmacy, Birmingham, spoke on the "Importance of Colleges of Pharmacy." The session closed with a banquet for the entire staff.

Abbott Builds New Lab.

Abbott Laboratories, North Chicago, Ill., has begun work on a new research laboratory adjacent to its main plant. The new building will be three stories in height and will contain approximately 42,000 square feet of floor space.

Sink Joins Lovely Lady

J. B. Sink, formerly field sales manager of Pepsodent Products and more recently sales manager for Lady Esther, has been appointed sales manager of Lovely Lady, Inc.

Bourjois Changes

Bourjois has announced the following executive changes:

John Brennan, who has been representing the company in the Metropolitan territory, will now devote his time to the Barbara Gould line.

Nelson Millard, who has been advertising manager, will represent the company in the Metropolitan territory, calling upon department stores and wholesalers.

Stanley H. Chambers, who has been engaged in the advertising agency business with Alfred Wallerstein and as vice-president of Redfield-Coupe, becomes advertising manager.

Burke Buys Maltbie Interest

J. H. Foy, president of the Maltbie Chemical Co., Newark, N. J., has announced that W. J. Burke has purchased a substantial interest in the company and has been elected a vice-president and member of the board of directors. He will retain his present position as general sales manager as well as assuming new duties in the general management of the company. Mr. Foy entered the employ of the Maltbie Co., in 1920.

Drury and Monsanto Stocks Safe

A fire which swept through a part of the Anchor Storage Co. building in Chicago on January 22, endangered the stocks of chemicals and raw materials housed there by A. C. Drury & Co., Inc. and the Monsanto Chemical Co. The fire was brought under control before any damage, either from fire or water, was done to the stock of either company and no interruption of shipments was made necessary.

Lauter, Strasenburgh Research Direc.

Dr. W. M. Lauter, who was formerly associated with E. R. Squibb & Sons and with the Upjohn Co., has been made director of research of the R. J. Strasenburgh Co., Rochester, N. Y. It has also been announced that the company has doubled the size of its research laboratories.

Tre-Jur Sales Convention

The House of Tre-Jur, New York, held a one-day sales convention on January 4 at the Waldorf-Astoria Hotel, at which John Tracey, formerly of Marshall Field & Co., Chicago, was guest speaker. Promotional and advertising plans were discussed and the men were acquainted with new lines for the coming season.

Several re-assignments of territories were announced involving Leonard Weiss, A. F. Sweeney, George Cabitt, Robert Vidaver, and Harold Salins.

Fischbeck Expands Organization

Recent additions to the organization of Charles Fischbeck Co., New York, are Harry E. Pfaltz, son of the late Henry Pfaltz, one of the founders of Pfaltz & Bauer, Inc., and C. Lloyd Fischbeck, son of Charles Fischbeck.

Hiscock Joins Oshei

W. J. Hiscock, formerly sales manager of cosmetic container division of Norton Laboratories, Lockport, N. Y., is now associated with B. F. Oshei, Inc., Buffalo. As in the past, he will concentrate on plastic containers for cosmetic products.

SALES STAFF OF MAGNUS, MABEE & REYNARD WITH W. F. FISCHER, SALES MANAGER, SEATED IN CENTER

Announcing

Kolmar Laboratories announce the opening of a new Eastern plant, located at 101-108 River St., Hoboken, N. J.

Because we are never satisfied with less than the best. Just as we use constant research to improve Kolmar products, so our business office is critical of Kolmar service. This is why we now open an Eastern plant. We hope thereby to present the maximum of efficient service for the East Coast as well as for the rest of the United States.

Kolmar laboratories
MILWAUKEE

Manufacturers of Serrate Puffs, Perm Indel Lipstick and Cream Rouge and Smooth as Silk Dry Rouge and Powder

These Kolmar Representatives will be pleased to serve you:

Chicago, Ill.
Norman Kole
11-108 Merchandise Mart

Atlanta, Ga.
Warren Curry
2895 Peach Tree Road

Los Angeles, Cal.
R. G. F. Byington
1709 W. 8th St., Room 504

Bush 25 Years in Canada

To celebrate the Twenty-fifth Anniversary of the incorporation of the company in Canada, W. J. Bush & Co., (Canada) Limited, gave a banquet to its staff and employees at the Queens Hotel, Montreal, on January 13, at which were present representatives from their different branch depots in Canada.

M. St. Alphonse, vice-president of the Canadian company, and grandson of the late William John Bush, founder of the organization acted as host for the occasion.

R. R. Webb, treasurer of W. J. Bush & Co., Inc., of New York, and National City, Cal., also a grandson of the founder, was one of the guests at this celebration and in responding to a toast to the American companies gave a short but effective address on what had been accomplished by "team work" by the staffs of the respective interests.

Thomas E. Beazley, plant superintendent of the Canadian company for the past twenty-five years, and for fifteen years with the parent company in England was presented on behalf of the directors and staff with a complete set of golf clubs and a case of pipes. The golf clubs and equipment are intended to provide the necessary diversion and the pipes the relaxation during Mr. Beazley's self imposed retirement following a period of forty years service.

A very happy evening was spent and the entertainment provided was enjoyed by all. Cables of felicitation were received from London, Paris, New York, Melbourne, Aus., and Johannesburg, S.A.

Corday's New Offices

Parfums Corday held the formal opening of its new showrooms and offices at 485 Fifth Ave., New York, with a reception to representatives of the press on January 7.

Goldschmidt Appoints Looser

Th. Goldschmidt Corp., New York, has appointed the Looser Chemical Co., 64 Wellington St., W., Toronto 2, Ontario, as Canadian agent.

Yake Joins Royce Chemical

E. E. Yake, who has been executive vice-president of the Sulphonated Oil Manufacturers' Association for the past two years, has resigned to accept a position as assistant to the president of the Royce Chemical Co., Carlton Hill, N. J.

Watkins Expands in Canada

J. R. Watkins Co., Ltd., Winnipeg, is building a $12,000 addition to its Canadian plant for the manufacture of disinfectants and medicines.

Mentholatum Builds New Plant

The Mentholatum Co., Wichita, Kans., will construct a new plant in Wilmington, Del. at Fifth St., and Greenhill Ave.

Woodbury Appoints Maggy Rouff

John H. Woodbury, Inc., announces that Maggy Rouff, internationally known couturier is now style and color consultant for Woodbury's germ-free facial powder.

Bissell, Mixing Equipment Sales Mgr.

E. S. Bissell, has been made sales manager of the Mixing Equipment Co., Rochester. He will be in charge of advertising and sales promotion.

Crown Cork Control Williams Sealing

Crown Cork & Seal Co., Baltimore, acquired a controlling interest in Williams Sealing Corp., Decatur, Ill., last July. The Williams company will remain under the same management as a subsidiary of Crown Cork & Seal.

Kentucky Tax Repealed

The Kentucky luxury tax on chewing gum, soft drinks, ice cream, candy, nuts and cosmetics has finally been repealed by a unanimous vote of the state Senate. The repeal of the tax which has been in effect for approximately eight months will become effective within ninety days.

New Schimmel Report

The 1936 Schimmel Scientific Report has been issued. The 162-page handbook contains a survey of activity, methods, sources, market conditions, and statistics of volatile and chemical oils, with pertinent information about each. It reviews scientific publications and patent specifications and presents an interesting discussion of the British, American and Hungarian Pharmacopoeia, and the National Formulary. Copies of the report can be obtained from Schimmel & Co., Inc., New York.

A.D.A. Accepts

SQUIBB'S ARSPHENAMINES

The Council on Dental Therapeutics of the American Dental Association has accepted E. R. Squibb & Sons' arsphenamines.

A.D.A. Rejects

NOVALDIN

Novaldin, manufactured by the Winthrop Chemical Co., Inc., New York, is not acceptable for the American Dental Association because the claims for its usefulness are not established, the advertising claims are misleading and unacceptable, especially since the potential harmfulness of continued administration is not mentioned, and it has no advantage over antipyrine and amidopyrine, which are official in the U.S.P., and are described in A.D.R.

WORCESTER SALT TOOTH PASTE

The A.D.A. has rejected Worcester Salt Tooth Paste because the manufacturers claim for what may be no more than a cleansing agent, preventive and therapeutic properties.

LARODON

Larodon, marketed by Hoffman La-Roche, Inc., Nutley, N. J., has been rejected by the A.D.A. because the advertising of Larodon is premature. The claims for its superiority over well-known and tried analgesics, and of its safeness, may be exaggerated and misleading.

CELEBRATING 25TH ANNIVERSARY OF W. J. BUSH & CO. IN CANADA

ORBIS OIL OF PEPPERMINT

SELECTIVE QUALITY

OIL Peppermint has always been an ORBIS specialty---and in offering both NATURAL and REDISTILLED oils, our years of experience in selection and redistilling insures a quality of utmost reliability and satisfaction.

IMPERIALMENTHA---distilled from selected plants, is high in natural menthol content, esters, and other U. S. P. requirements.

Testing samples and prices will be promptly supplied upon request.

ORBIS

PRODUCTS CORPORATION

215 PEARL STREET, NEW YORK - FACTORY & LABORATORY, NEWARK, N. J.

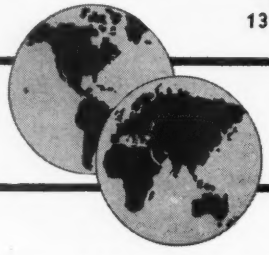
CHICAGO
844 Rush St.

PHILADELPHIA
253 Bourse Bldg.

BOSTON
131 State Street

LOS ANGELES
742 So. Hill St.

Water Soluble Gums	Waxes	Cosmetic Raw Material	Fruit Flavors
Thymol	Stearic Acid	Oleo Resins	Food Colors
Aromatics	Essential Oils	Perfume Bases	Quince Seed
Rice Starch	Zinc Oxide French	Olive Oil	Irish Moss



A.M.A. Rejects

CARASYL

Carasyl Plain, Carasyl with Cascara, and Carasyl with Aloin and Cascara, manufactured by Lorayne Laboratories, with the base Carasyl consisting of psyllium flour, karaya gum, and fig flour, have been rejected by the Council on Pharmacy and Chemistry of the A.M.A. because they are marketed with unsubstantiated therapeutic claims and under a proprietary name.

Goby, of Tombarel, Visits Here

Francois Goby, director of S. A. Tombarel Freres, Grasse, France, arrived January 7 on the LaFayette to visit Tombarel Products Corp. of which L. J. Zollinger is president and general manager. His brother John Goby, who is a graduate chemist from Lyon University, France and who has been working in the laboratories of the company for years, arrived on the Paris, February 3 to cooperate with the new organization in setting up its laboratories here.

John Goby was here in 1924 when he spent six months studying American methods. Since then he has been in Grasse devoting his time to research work on essential oils and perfumes for all purposes. It is his intention to remain in the United States for some time to familiarize himself more completely with the requirements of the trade and bridge the gap between the American concern and the Grasse concern.

Francois Goby is well known in the United States as he has made trips here regularly in the last fifteen years.

Belleville, N. J. Plant Offered

A fine plant in Belleville, N. J., which is ideally suited for drug or cosmetic manufacturing is now available. We shall be glad to pass on the name of the owner of the plant to anyone who is interested.

Givaudan Sales Meeting

Givaudan-Delawanna, Inc., recently held its annual sales meeting at the New York offices, 80 Fifth Ave., New York. Representatives were present from all parts of the country.

Dr. Eric C. Kunz, vice-president and executive manager, opened the meeting with a speech of welcome, and expressed his appreciation for the fine cooperation, and enthusiasm displayed throughout the organization in the various departments. He pointed out that during the year 1936 the company made exceptional progress, and particularly stressed his optimism in regard to business in general for 1937. New products and developments of the company were discussed for the next few days, after which the sales representatives were conducted on a personal tour of the factory at Delawanna, N. J. by Dr. M. Szamatolski, factory supervisor.

The meeting was brought to a close with a dinner held in the Hotel Brevoort, attended by the sales representatives, and executives of the company.

Armstrong Cork Changes

Changes in the district offices and changes in personnel have been made by the Armstrong Cork Products Co., Lancaster, Pa. New offices have been established in Washington, Los Angeles and San Francisco. The district manager in Washington is E. S. Graybill. C. B. Sauer, formerly in the company's Des Moines office is district manager in Los Angeles and F. K. Pinney, formerly in the Armstrong floor division, is district manager in San Francisco.

Washington News

Drug Bill Situation

With the two new Food, Drugs, and Cosmetics Acts introduced by Senator Copeland and Congressman Chapman, both giving advertising control to the Food and Drug Administration, friends of the Federal Trade Commission have promptly taken steps toward the defeat of these bills. These people plan an amendment to the Federal Trade Commission law giving the Commission power to seek injunctions against false advertising dangerous to health. If Congress enacts this legislation, it will be used as an argument why no new Food, Drugs, and Cosmetics Act is necessary. This amendment may be introduced by Representative Lea, of California, Chairman of the House Committee on Interstate and Foreign Commerce.

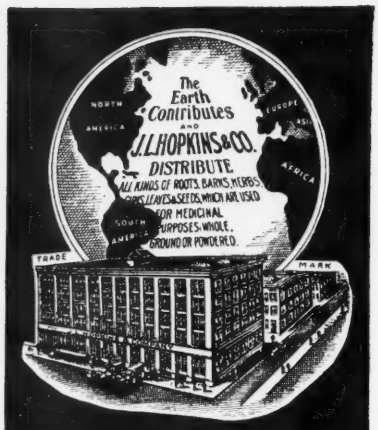
The Lea amendment would do away with the necessity of the Commission proving competition in cases of false ad-

Outer Circle—Left to right: Frank H. Seely, Arthur G. Fox, George M. Warren, Ira Bennett, J. Balsam, H. F. Duffy, Dr. M. Luthy, Dr. M. Szamatolski, Dr. Eric C. Kunz, R. M. Stevenson, Dudley F. Lum, Dr. G. A. Geiger, John K. Stevenson, Charles Doran, J. D. Walsh, R. A. Engel, Fred Fielding, E. R. van Liew, John Bush, Center Group: Front: C. L. Armstrong, Edwin P. Nicholson, M. B. Vance, F. W. Wegman; Rear: H. L. Shaftoe, L. L. Lowden, D. Watson, George H. Blake.

BASIC INGREDIENTS

FOR TOILETRIES • COSMETICS • PROPRIETARIES

In literally hundreds of cases, Hopkins' Foreign and Domestic Botanical Crude Drugs surpass in quality U. S. P., N. F. or Government requirements, usually by a substantial margin. Each article assures you 100% maximum, unadulterated strength, tested, true-to-name and quality. Our complete stocks include every Domestic and Foreign Botanical Crude Drug for which there is a commercial demand—as well as prepared Specialties of a very high order and decided economy.



"Quality is remembered long after price is forgotten"

Deolated Almond Meal	*Henasoap Shampoo*
Balsam Tolu	*Indian Gum (Karaya)*
Benzoin Gum	*Talcum*
Chalk (Precip.)	*Irish Moss*
Chinese Shavings	*Lavender Flowers*
Cuttle Fish Bone	*Olibanum*
Gum Arabic	*Orris Root*
Gum Tragacanth	*etc., etc.*

HOPKINS' FACTOLAC

● For the preparation of permanent emulsions of both fixed and volatile oils. Insures complete homogeneous mixture of oils and water without trituration or special apparatus. An ideal emulsifier.

HOPKINS' NEUTRAL WHITE SOAP

● Powdered, granulated. Contains no soap bark, free alkali, free acid or heavy metals. Totally free of rosin, sugar and foreign matter. Snow white.

EGYPTIAN HENNA

● Consists solely of choice Egyptian leaves. Laboratory tested, absolutely unadulterated. Milled on slow-stone grinders assuring intactness of full coloring content. Purely vegetable.

FREE ON REQUEST

SAMPLES, PRICES AND PRICE LIST OF HOPKINS' CRUDE BOTANICAL DRUGS AND LABORATORY BASIC SPECIALTIES.

J.L.HOPKINS & COMPANY 220 Broadway NEW YORK

BLEACHING — WITHOUT CHEMICALS

This is a photograph of our beeswax factory. It shows the large and numerous bleaching racks where—during the summer months—the beeswax lays in the open air and bleaches in the sunlight.

We have had 80 years experience in this method of bleaching beeswax by the sun. It excells all other methods. It does not bring the beeswax in contact with any chemicals. It results in a pure beeswax of high quality, especially suitable for cosmetics.

● SUN-BLEACHED AND YELLOW BEESWAX

KOSTER KEUNEN SAYVILLE (LONG ISLAND) NEW YORK

IN THE MIDDLE WEST: WALTER H. JELLY & CO., Inc., 412-420 N. WESTERN AVENUE, CHICAGO, ILL.

vertising. It would also place a sixty day limit upon a respondent under a Commission complaint if he wishes to appeal from a Commission order. At present a respondent can delay appeal for a year.

Another bill sponsored by Senator Wheeler, of Montana, Chairman of the Senate Committee on Interstate Commerce, and Senator Barkley, of Kentucky, assistant Democratic leader, would increase the Commission's power in requiring books, papers, and accounts in connection with its investigations.

Senator Copeland professes complete confidence in the passage of his bill. He says that Senators Clark, of Missouri, and Bailey, of North Carolina, are now with him. He pooh poohs the suggestion that the Administration will seek to defeat the bill because of failure to support the New Deal in the last election.

Senator Copeland is referring his bill to the following subcommittee of the Senate Commerce Committee: Senators Copeland, New York; Bailey, North Carolina; Clark, Missouri; Caraway, Arkansas, Democrats; McNary, Oregon; Vandenburg, Michigan; Gibson, Vermont, Republicans. Of these, Copeland, Caraway, and Gibson were on the subcommittee which handled this legislation last Congress. They are understood to favor the bill. Senators Bailey, Clark and Vandenburg, on the other hand, opposed the bill or certain of its provisions last Congress. Vandenburg, incidentally, is perhaps the leading policy maker in the Republican Congressional ranks.

Senator Clark, of Missouri, who was the spearhead of the opposition to the Copeland Bill in last Congress, is now favorable to the bill. The reason given is that certain drug and chemical people in Missouri, who fought the bill, also fought the Roosevelt Administration using tactics that do not appeal to Senators Clark and Bailey who are staunch Democrats.

Aside from political complications, supporters of the new bill says that the provisions has been eased. It does away with criminal penalties for false advertising which could be handled by informal notices, followed by injunction proceedings. Opposition to the bill forsees the dockets of all Federal courts cluttered with these petitions for injunctions, and they indicate that the issuance of temporary injunctions will make the defendants appear guilty before the public.

People in the industry want the seizure clause changed from products "dangerous to health" to read "imminent danger to health." The Food and Drug Administration is said to prefer the Chapman Bill to the Copeland Bill.

Tydings Bill Hearing Held

Hearings on the Miller-Tydings Bill were held during the past month in Washington before a House Sub-committee on Judiciary. This is the bill which would permit State Fair Trade Acts to be operated interstate. Representatives of the N.W.D.A., N.A.R.D., F.W.D.A., and other groups appeared in support of the bill, while representatives of R. H. Macy & Co., and other price-cutting stores and organizations appeared in opposition to the bill. Enactment of the bill is anticipated.

If this bill is enacted, it will deprive the Federal Trade Commission of its right to issue complaints and orders against price-fixing as violating the anti-trust law, in the opinion of Commission experts.

Primrose Cited Under R. P. Act

The Federal Trade Commission is issuing additional complaints under the Robinson-Patman Act, having lately cited Primrose House. This firm is charged with having given allowances, services, and facilities on other than proportionately equal terms. The discrimination occurred in demonstrators, beauty counselors, free goods, cooperative advertising, and transportation.

President Approves Cosmetic Tax

Tax and revenue measures will go over at least until after the March 15 income tax returns have been received and tabulated by the government at which time a fair estimate of the government income can be made. Extension of the nuisance taxes, including the cosmetic tax, has been recommended by the President, although Representative Norton, of New Jersey, has introduced a bill to repeal the cosmetic tax. It is expected that attempts will be made to modify the tax on undistributed corporation profits in a limited way.

Obituaries

Frank Revson

Frank Revson, father of R. F. Revson, president of R. F. Revson Co., died at his home in Atlanta, Georgia, January 22. He was seventy-nine years old.

Robert Read

Robert Read, chief chemist for Van Ameringen-Haebler, Inc., died at his home in Elizabeth, N. J., January 12. Mr. Read, who was born in London, England, was sixty-eight years old.

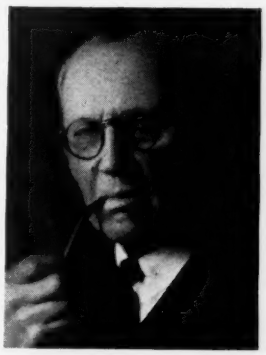
Edmond Allain

Edmond Allain, for more than forty-one years associated with E. Fougera & Co., died at his home in Brooklyn at the age of eighty. Mr. Allain, who was born in France, joined E. Fougera & Co. as a young man and remained with the company until his retirement a few years ago.

David H. McConnell

David H. McConnell, President of Allied Products, Inc. and its affiliate, the California Perfume Co., died at his home in Suffern, N. Y., on January 20. Mr. McConnell was seventy-eight years old. His death was caused by a streptococcus infection. Although he had been ailing for some time he was able to visit the New York offices of his companies, at 114 Fifth Ave., as recently as two weeks before his death.

Mr. McConnell was born on a farm in Oswego, N. Y., and after being educated at Oswego State Normal and Training School he toured the country as a salesman of books and silverware. He started the California Perfume Co. in 1886 in a combined office and laboratory located at 126 Chambers St., New York. Since that date he served continuously as president of both the above named companies and saw the original modest laboratory grow, through seven progressive additions, into the present immense plant.



DAVID H. McCONNELL

He was one of the founders of the Suffern National Bank and Trust Co. serving as an officer of that organization continuously since its beginning. At the time of his death he was that institution's president and chairman of the board. He was also treasurer of G. W. Carnrick & Co., of Newark, N. J., manufacturers of pharmaceutical supplies and a director of the Holly Hill Fruit Products Co., of Davenport, Fla.

He was a member of the Union League Club of New York; the Houvenkopf Country Club, Arcola Country Club and Ormond Beach Country Club. He served for many years on the Board of the A.M.T.A.

Surviving are his wife, Mrs. Lucy Hays McConnell, whom he married in 1886; a brother, George McConnell, of San Francisco; two sisters, Mrs. Robert McMillan, of Fulton, N. Y., and Mrs. Margaret Groat, of Oswego; a son, David H. McConnell, Jr., executive vice-president of both California Perfume Co. and Allied Products, Inc., and two daughters, Mrs. W. Van Alen Clark, of Suffern, and Mrs. E. Hall Faile, of Westport, Conn.

Books - OF IMPORTANCE TO DRUG AND COSMETIC MANUFACTURERS

COSMETICS and PERFUMES

Modern Cosmetics—Chilson, 396 pp.	$ 6.00
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Inorganic and Theoretical Chemistry—Taylor.	6.00
The Chemists Year Book—Atack.	6.00

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INDUSTRY'S BOOKS

Any book reviewed in this section can be purchased direct from THE DRUG AND COSMETIC INDUSTRY at regular publisher's price.

How to Sell Cosmetics, by Edyth Thornton McLeod, cloth 104 pp., The Drug and Cosmetic Industry, New York, price $2.00.

Many books have been written on the subject of cosmetics. Formula books, production methods and dermatological effects have been thoroughly covered by American and Foreign writers. The very important subject of how to sell cosmetics, however, has heretofore been neglected.

Edyth Thornton McLeod has covered this gap in cosmetic literature. Her book is the result of many years experience in training others to sell cosmetics, in which field she is preeminent.

As a textbook for anyone selling cosmetics direct to the consumer this work is highly recommended. It should prove an invaluable aid to the trained salesgirl and a guide to the trained one. It is full of valuable sales suggestions and ideas which should be of value to the cosmetic demonstrator and the cosmetic salesgirl.

Do you know where rouge should be placed on the round face for the best effect? Do you know how powder is best applied? What is meant by "allergy" and how do you handle the allergic client? Have you the fashion angle on make-up? These and many more troublesome questions are answered by Miss McLeod out of the storehouse of her vast experience.

This book also contains many interesting suggestions for the personal application of cosmetics which should appeal to all women.

U. S. Dispensatory, 22nd Edition, Wood and LaWall, 1862 pp., J. B. Lippincott, Phila., Cloth $15.00.

The U. S. Dispensatory is an encyclopedia of drugs used in the United States, Canada and Great Britain, and is well known to every pharmacist, medical student and chemist. The first edition of this work appeared in 1833 and now, 104 years later, the Centennial (22nd) edition is ready for distribution.

Each edition of this work has constituted almost a continuous endeavor from the moment that the previous edition appeared on the market. The present edition, for instance, took eight years in preparation and contains data compiled continuously during that period.

Principles of Biochemistry, by Albert P. Mathews, 512 pages, William Wood & Co., Baltimore, $4.50.

Intended as a text book for those who do not wish to consult original literature, this work broadly covers the whole field of biochemistry. The six subdivisions of the book give a good idea as to its specific contents. These are: Chemistry and Metabolism of the Glucides; Chemistry and Metabolism of the Lipides; Chemistry and Metabolism of the Proteins; The Special Chemistry of Important Tissues. Blood and Connective Tissues; The Catalytic Agents of Growth and Development. Vitamins and Hormones; The Income of Energy.

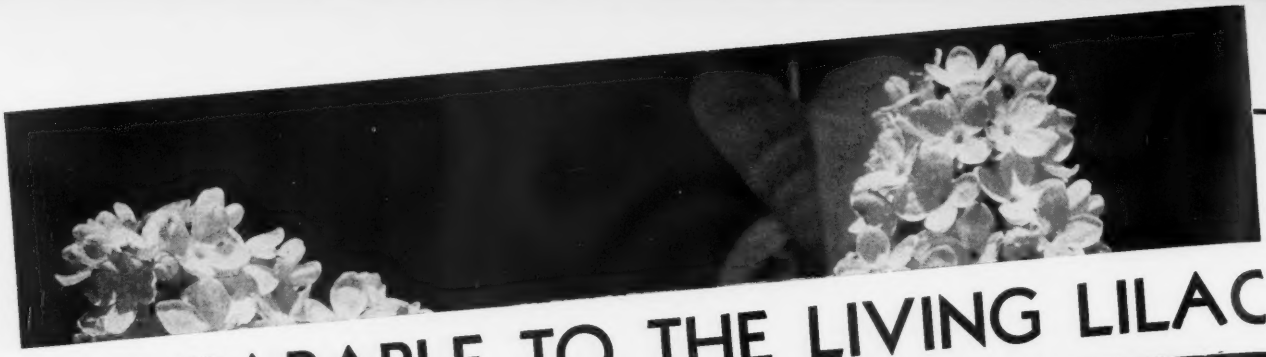
Inorganic Pharmaceutical Chemistry, by C. H. Rogers, 724 pages, Lea & Febiger, Philadelphia, $7.00.

The subject matter of this text book is formulated and arranged especially for those students of pharmacy who have a foundation in the basic chemical subjects, inorganic chemistry and qualitative analysis. For those to whom the U. S. Pharmacopoeia and the National Formulary are not readily available, this book will prove valuable as a reference work. It is not intended, however, to replace a text on general chemistry. There have been represented only such chemical subjects as are directly or indirectly explanatory of the processes of manufacture, the tests for identity and the assays of Pharmacopoeial and National Formulary compounds.

The Art of Compounding, by W. L. Scoville and J. L. Powers, Sixth Edition, 620 pages, P. Blakiston's Son & Co., Philadelphia, $4.75.

Little need be said about the usefulness and importance of this great text-book other than a description of the additions and revisions that make up this sixth edition. Two new chapters have been added, on Glandular Products (written by H. E. Morton of the School of Medicine of University of Pennsylvania) and on Vitamins (by R. L. Grant Research Fellow in Internal Medicine in the University of Michigan Hospital). The chapter on Biological Products has been entirely rewritten by Dr. Morton who has adhered to the original intent of this chapter, keeping in mind the view of the pharmacist, and has aimed to present only

(Continued on page 243)



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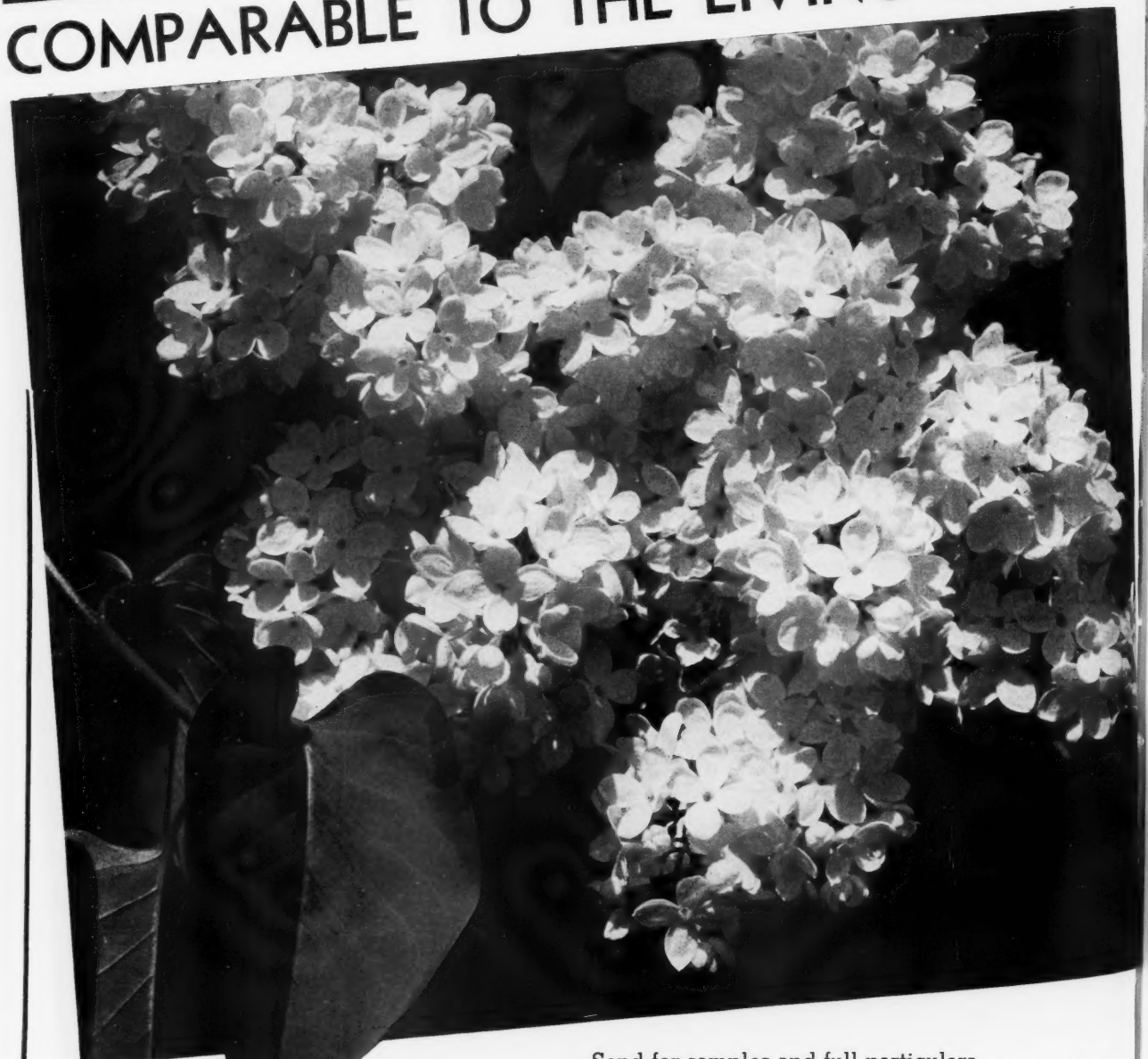

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Today, the rich, persuasive fragrance of AVRYLLIS is lending added sales appeal to hundreds of diverse products—creams, lotions, perfumes, powders, toilet and perfumed preparations of every kind. In some it provides a foundation odor of full-flowering lilac; in others it adds subtlety, distinction and depth to the key fragrance. In either case it imparts an appeal of which only AVRYLLIS is capable. Sooner or later, directly or through competition, you will discover the power of this appeal. Why not discover it directly? . . . Let us send you a testing sample by return mail.

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ESSENTIAL OILS • SYNTHETIC FLOWER OILS • AROMATIC CHEMICAL PREPARATIONS • AMYL and ETHYL ETHERS • OLEORESINS • RESINOIDS and ANIMAL FIXATIVES • DEODORIZING COMPOUNDS • ANTI-OXIDANTS

SPECIAL PERFUME COMPOUNDS for TOILET WATERS LOTIONS, POWDERS, CREAMS, HAIR PREPARATIONS, BATH SALTS, SOAPS, ETC.

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Take advantage of our experience; let our Research and Service Departments assist you.

Industry's Books

(Continued from page 241)

pharmaceutical considerations, without considering therapeutic values.

The chapter on Incompatibilities has been completely rewritten and a special index for this chapter is included for the first time. More than 850 prescriptions, many of which are new, are now included as directly illustrative of the text.

Chain Store Manual, by John P. Nichols, 1936 edition, 143 pages paper cover, Institute of Distribution, Inc., New York, price 50c.

This booklet is written in defence, and for a better understanding of chain store merchandising. It is directed toward giving the public a brief presentation of the true social and economic values of chain stores.

Recent Advances in Medicine, by G. E. Beaumont and E. C. Dodds, Eighth Edition, 450 pp. illustrated, P. Blakiston's Son & Co., Inc., Phila., $5.00.

The eighth edition of this work was made necessary by recent changes in medicine and has afforded the authors an opportunity for a thorough revision. Rapid advances have been made in the knowledge of sex hormones, vitamins and ductless glands and Chapter I dealing with these subjects has been brought up to date.

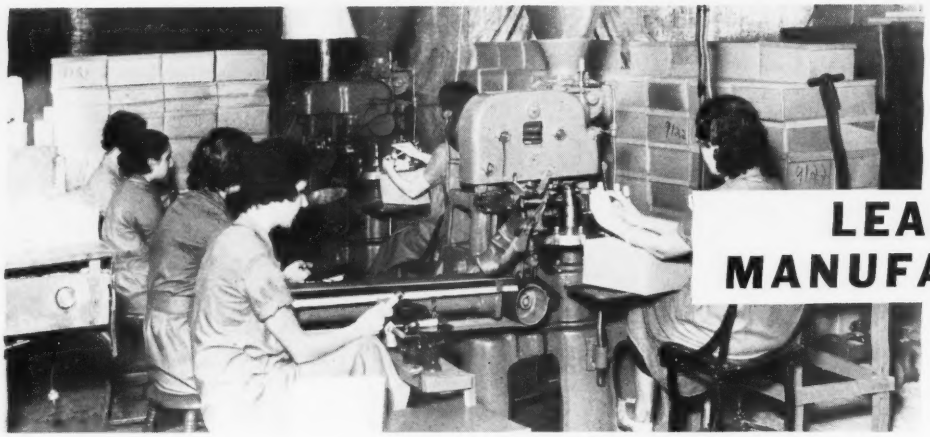
Other chapters revised in part or in whole are: Chapter II—The Kidneys; Chapter III—Glycosuria and Diabetes Mellitus; Chapter IV—Pancreatic Function; Chapter V—Investigation of Hepatic Function; Chapter VI—The Stomach; Chapter VII—Basal Metabolism; Chapter VIII—Cardiovascular System; Chapter IX—The Lungs; Chapter X—The determination of the Susceptibility to Diphtheria; the Treatment of Carriers, and Immunisation against the Diseases; Chapter XI—The Determination of the Susceptibility to Scarlet Fever. Immunisation Against the Disease; Chapter XII—The Nervous System and Cerebrospinal Fluid; Chapter XIII—Types of Anaemia and their Treatment; Agranulocytosis; The Sedimentation of the Red Cells; Chapter XIV—Blood and Urine Analysis.

Recent Advances in Organic Chemistry, by Alfred W. Stewart, 519 pages, Longmans, Green and Co., New York, $8.50.

This sixth edition, volume II, is dated 1936 and is fully up-to-date in its discussion of a rapidly progressing field of chemistry; despite front page prominence given physics and chemical physics, organic chemical research remains enormously productive. Chapter headings will give a definite idea as to the scope of the work; each chapter represents fine work in editing to give a complete, unified story.

Chapters include "Some Carbohydrate Constitutions," "The Sesquiterpene Group," "The Diterpenes and Triterpenes," "Rubber," "Alkaloids," "Anthocyanins," "The Chlorophyll Problem," "Depsides," "Natural Syntheses of Vital Products," "The Diphenyl Problem," "New Organ-Alkali Compounds," "Abnormal Valency," "Applications of Electronics to Organic Chemistry," "Bile Acids and Sterols," "Cardiac Aglucones," "Hormones," "Vitamins."

ANOTHER STOKES "90-D" INSTALLATION



in the plant of another LEADING MANUFACTURER

Stokes 90-D Machines for automatically filling, closing and sealing collapsible tubes--in the plant of McKesson and Robbins.*

McKesson & Robbins, a typical user, ordered--and reordered--Stokes 90-D Machines for filling on a production basis their varied line of ointments, shaving creams, tooth pastes, etc.

These machines are compact, self-contained, simple to operate and "change-over" for different products. The same machines are used to fill small (3/8" x 2") eye salve tubes and giant (1 1/2" x 7") tubes of shaving cream. They fill accurately, cleanly, and rapidly--up to 50 per minute with one operator. Their ease of adjustment simplifies operation and their rugged construction practically eliminates maintenance costs.

Ask about two new developments: an arrangement for "fat-filling" of tubes which enhances sales appeal and saves tube metal, and the Westite Hermetic closure which eliminates all "seepage" difficulties.

We supply hand-operated as well as power-driven equipment and will gladly recommend the type of equipment best suited to handle your requirements economically.

Let us know the type of your product and the production desired. Send also for Catalog 34-F.

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PRODUCTION ENGINEER

U. S. AUTOMATIC WASHER

This Junior model Automatic Washer is a new machine adaptable for washing drugs and cosmetic bottles in high speed production.

Outstanding features according to U. S. are: The shortest and most compact washer having an automatic feed and discharge; production capacity up to 250 per minute; novel U. S. feature of the drum for holding flights does away with use of chains on machine, making possible absolute centering of bottles at any operating speed, and eliminating wear of bottle pocket mechanism.

Also there is an external ejector for removing bottles from flight pockets, one of the novel features upon which very broad patents have been granted to U. S.

All water contact parts are bronze. Flights are cold rolled brass, and the U. S. patented rubber bottle pockets in the Senior model are also provided on this machine. These rubber bottle pockets eliminate danger of chipping bottle necks and prevent possibility of glass breakage.

The machine is equipped throughout with adjustable self-aligning roller bearings and has a variable control for speed, so that the operating ratio maintained can be instantly adjusted to any operating speed required, the operating ratio being 2½ to 1. The whole unit is operated with a single half horse power motor.

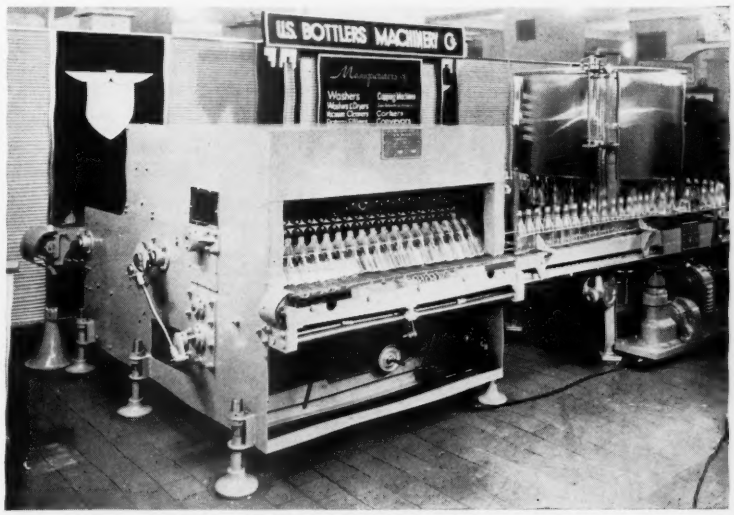
Because of its perfected structural features and the novel feed and discharge, no operator or attendant is required after the machine is set in operation, except to place a whole case of bottles on the feed at one time, and remove the empty case. The Unscrambler Feed automatically feeds the bottles to the machine.

LABORER'S HIRE

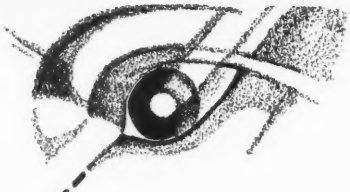
"A couple of months ago," says one of the boys in the trade, "we read your piece on the treatment and payment of the hired hands. After we finished it we concluded that it must have been written about 3 a. m. because we've observed on several occasions that you become idealistic as hell along about that time—even to the extent of paying off the help at a higher price than they agreed to work for. But in view of developments at General Motors what do you think of labor now?"

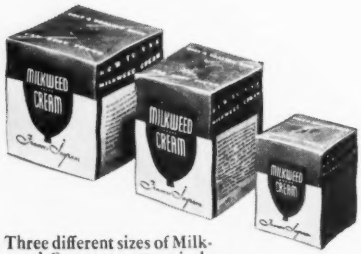
We're quoting this paragraph verbatim because after reading it over a few times we were quite unable to understand part of it. But we gather that our stand on labor is being challenged. Well, we've had no occasion to change our belief that in the main, labor, when well treated and assured of security, is truly conservative. Perhaps we should have qualified the opinion by adding "unless it falls into the hands of labor union racketeers." Herein, we think, lies the essence of the difficulty General Motors is having; herein, we also believe, lies the answer to most labor troubles everywhere. I think that this opinion is substantiated by the fact that the union organizers control only a very small part of General Motors' workers and also by the expressed demand of a majority of these workers that they be given a chance to go back to work.

We haven't and never have had any belief in or sympathy with unions and union leaders. We believe, as Mark Sullivan has pointed out, that labor organization is a profession and a profitable one for those who pursue it. Union leaders and their



Package Improvement with an EYE on Costs





Three different sizes of Milkweed Cream are attractively wrapped in cellulose by one of our adjustable machines.

Printed transparent cellulose wrapper located accurately on the goods by one of our Electric-Eye wrapping machines.

This package appetizingly displays the dates; also protects goods against weevils or other contamination.

Wrapped in Cellulose with easy-opening tape. *This type of wrapping prevents substitution and imitation because it cannot be duplicated by hand.*

In recent years package-improvement has become just about as important as product improvement. . . . For manufacturers appreciate, more than ever before, the heavy task which the package must bear in *making the sale.*

We have assisted many concerns in carrying out such improvements. The great variety of products and types of packages involved in this work has given us valuable experience and a knowledge of modern packaging trends.

Moreover, it has demonstrated the necessity of keeping a vigilant eye on costs. . . . Many of our customers work on a very narrow profit margin per unit of sale, so that even a fraction of a cent saved per package is important.

If you plan a package improvement, it will pay you to consult us well in advance. We can give you definite and authoritative information as to the type of package best suited to machine production; the kind of material to use; the form in which this material may be purchased at lowest cost; the mechanical equipment and plant layout for the utmost efficiency. . . . In fact, when the problem is thoroughly studied we sometimes find that the improved package will actually cost less than the former one.

SUGGESTIONS

We may be able to suggest an improvement in your package which has not occurred to you—or a way to save you money. Send us your package with a brief description of your present methods. We will be glad to give you our suggestions without obligation. Get in touch with our nearest office.

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organizers are professional men without economic or social responsibility. We've known a few of the small fry of the profession and it always seemed to us that for men of their evident abilities they were exceedingly well paid. Some of the big fry may well to be said to exist on the fat of the land. Truly, they live by the sweat of other people's brows. It's a swell racket and we wish we were in it.

We realize that these generalizations are a bit broad perhaps. We've heard of union leaders who live up to their contracts and who force their members to conform to standards governing quality as well as quantity of production. If they all did this they would get employers' co-operation more readily. We know that there are still a few employers who cannot see the distant dollar for the immediate penny. But we feel that the growing belief among a majority of employers, that to provide well for labor is also to provide well for themselves, will do more ultimately than all professional labor organizers who get such liberal rewards for their efforts. We simply do not believe, as so many people do, that unions had anything to do with improving the condition of labor in this country. One of the first industrialists to see that to pay labor well is to provide insurance for future dividends, is Henry Ford, than whom labor unions have no more ruthless antagonist.

Since labor and management together are responsible for the income of industry, we don't think that either labor or management gets a sufficient share of the money they earn for stockholders. Investors, who take no active part in a business, know nothing about it, and as a rule do not give a damn about it so long as they get their haul, receive far more than their original contribution of capital is worth. If more of the dividend money was reserved to provide bonuses for management and labor alike, we shouldn't have to worry about labor unions and the industrial warfare which they foment.

Anyway, God save us from the union-ridden conditions that prevail in New Zealand and in Australia!

SEND FOR A COPY

Of the new England Tank & Tower Company Bulletin 370—a seventy-six page catalog showing their complete line of agitating equipment.

This catalog also contains a new Hand Book and Data Section beginning on Page 56—which contains information never before printed, to our knowledge, and which we think will be of interest to readers. Because of this data the book is copyrighted.

LABORATORY PRESS

Pharmacists and manufacturers interested in compressing pharmaceutical specialties into tablets on an experimental or limited production scale will be interested in a motor driven model of the

well-known Stokes Eureka Tablet Making Machine, which in its hand-operated form, is widely used in this country and abroad, has just been placed on the market by the manufacturer, the F. J. Stokes Machine Co., Philadelphia.

This machine, easy to clean and "change-over" for different size tablets, has an output up to 100 tablets per minute, in sizes up to ½ inch (1.27 cm) in diameter.

SMALL FILTER PRESS

A new, small, portable, complete filtration unit has been developed by T. Shriver & Company, Harrison, N. J., which meets the needs of many industrial laboratories, pilot plants and regular production requirements.

This unit consists of a Shriver plate and frame type pressure filter of as many chambers as may be required. The one illustrated has 8 chambers which provides capacity for filtering up to 90 gallons of fluid per hour. For clarification of liquids containing a small percentage of solids, recessed solid frames are supplied; otherwise the frames may be hollow to allow for greater cake capacity.

The filter is fed by a Shriver Diaphragm Pump, direct connected to a ¼ H.P. motor, together with a startling switch, cord and electric plug, all mounted on a portable stand on roller bearing casters. The entire equipment measures overall only 35" long, 16" wide.

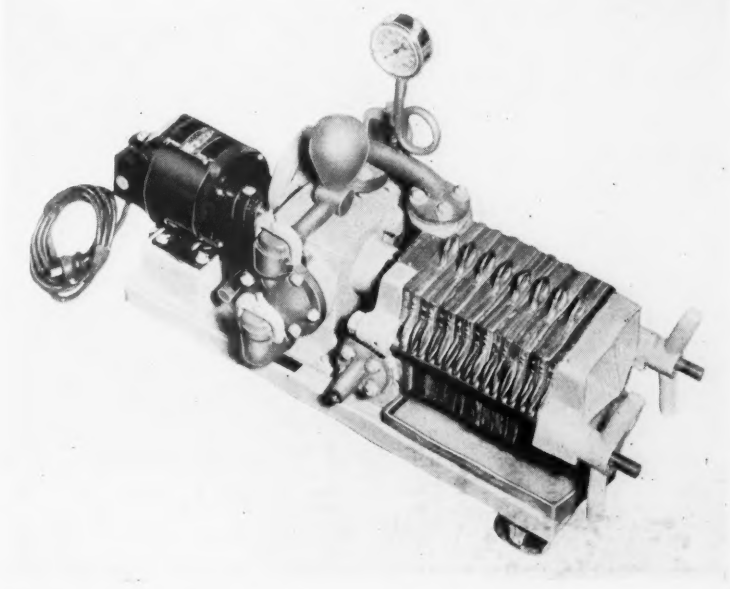
The plates and frames of the filter and the liquid ends and other parts of the pump coming in contact with the fluid can be made of any metal that is best suited to withstand the chemical and physical characteristics of the material handled. Thus, cast iron, bronze, aluminum, Monel metal, stainless steel or lead may be used or cast iron may be galvanized, plated or rubber coated.

This unit is low in cost, and easily applicable for various solutions in the plant, being readily moved to tanks or containers.

OVERLOAD AND SHORT-CIRCUIT PROTECTORS

A greater degree of protection for electrical equipment is provided by the Re-Cirk-It breaker developed by Heinemann Electric Co., Trenton, N. J. These fully magnetic and non-thermal units are available in instantaneous and time-delay types, any ampere rating from 50 milliamperes up to 35 amperes, and for circuits operating on just a few volts on up to 250 volts D. C. or 460 volts A. C. There is ample choice of poles (up to three), overload coils, shunt-trip coils, and mounting and casing styles.

The Re-Cirk-It breaker has a tumbler handle for switching currrent on and off. Automatic breaker action is controlled by ingenious hermetically-sealed magnetic



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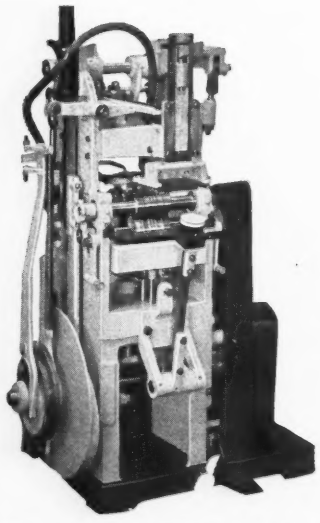
A labeling unit that does its job 100%



The standard PONY unit, which can be installed for feed by hand or from conveyor. Installed as is, it can readily be altered to run in tandem at any later date, for increased production requirements.

Here at last, is *perfect* register, and "change parts" that are petty cash items; or can be made right in your own shop! Elimination of glue-seepage, with the inspection and wiping of containers. Handles foil labels as well as paper . . . . applies them on arcs, flat surfaces or recessed areas. Made in standard units; tandems for duplex labeling, or turret style for high-speed production. Fits into any production line-up . . .

Pony Labelrite

Any label that can be glued by hand—regardless of size or shape, can be applied faster and better on the PONY. Take sizes as small as ¾ by ¾ inch. Now being used for vials, flasks, jars, bottles, boxes, tip-ons, outserts and spools in food, drugs, cosmetic, toiletries, chemicals, glassware and greeting card manufacturing. Write NOW, for demonstration and details, sending sample labels for test and report.

NEW JERSEY MACHINE CORP.

1600 Willow Ave. Hoboken, N. J.

Chicago Office—549 W. Washington Blvd. West Coast Agent, L. H. Butcher Co., Los Angeles, Calif.

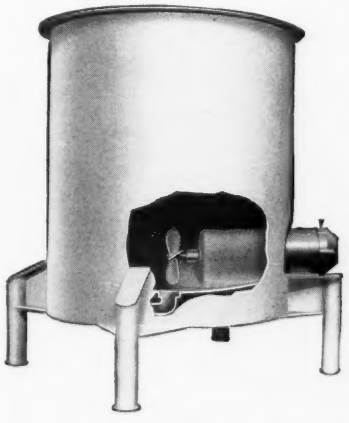
trip device. After opening on overload or short-circuit, the unit may be reclosed at once, providing current has returned to normal. No resetting is necessary. There is no time lost. Trip point is practically unaffected by ambient temperature, and is immune to ordinary mechanical shop. It cannot be held closed against existing overload or short-circuit.

In the case of time-delay units, a choice of four time-overload curves is offered, so as to time the trip from 5 seconds up to 8 minutes on a 125% overload, with shorter intervals for greater overloads. On a short-circuit, the breaker trips within a small fraction of a second. This time-delay feature takes care of momentary overloads at starting without troublesome tripping, while offering full protection from prolonged overloads as well as shorts. Re-Cirk-It units are available in open types, in enclosed bakelite cases for mounting on machines or panels, in plastic enclosed types for panel groups, and mounted in steel safety cabinets. Also in a heavy metal-casting housing for service in inflammable and explosive locations.

MIXER

The "Lightnin" Portable Mixing Unit, built by Mixing Equipment Company, Rochester, N. Y., was first developed for the paint industry where its mixing speed and its portability won it a ready acceptance. So popular has it proved since its introduction less than a year ago that it is now widely used in the process and allied industries. For thorough, uniform mixing, tinting, and coloring, it is in a class by itself.

The especially designed patented housing for the mixer introduces the agitator in an angular offcenter position which results in a double mixing action—complete rotation plus bottom-to-top turnover. The mixer housing serves as a baffle which still further increases mixing efficiency. The



built-in explosion resistant motor is approved by Underwriter's Laboratories.

Portable either on truck or casters, the unit can easily be moved from one source of supply to another—eliminating needless piping. It likewise can easily be moved about the plant for part time duty, still further reducing your mixing costs. Can be operated wherever drop cord is available. Extra ruggedness in every detail of design and construction assures a wide margin of safety while being moved.

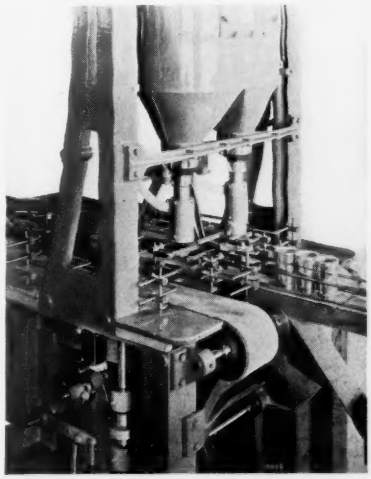
Where the portability feature is not desired, this unit, due to its remarkably high degree of efficiency, makes an ideal stationary unit. Available in 100, 300 and 600 gallon sizes.

STOKES & SMITH POWDER FILLER

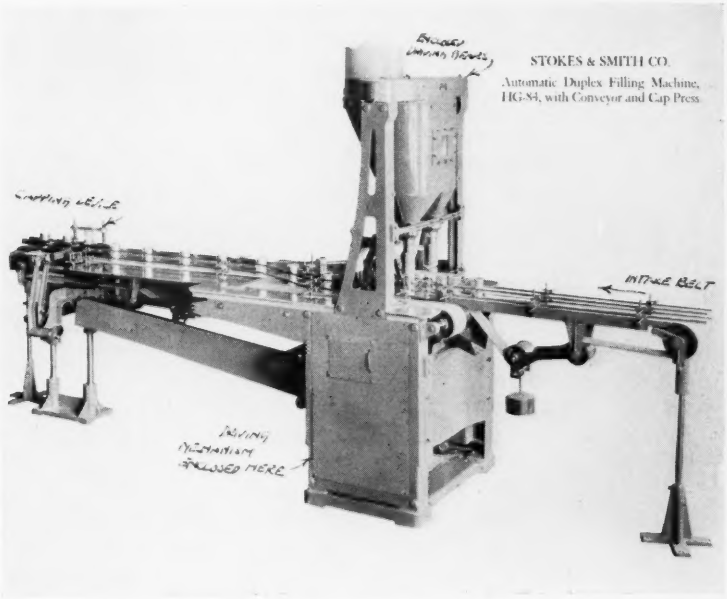
Stokes & Smith Co. of Philadelphia would like you to write them for particulars about their HG-84 automatic powder filling machine. This heavy duty, high speed machine is particularly adaptable to filling cans. It is said that the machine is unusually quiet, dustless and extremely accurate. The thing which appeals to us about this machine is that it is not necessary to spot the containers on the intake conveyor, they are merely dropped on a conveyor belt which carries them under the filling heads, following which the filled containers are discharged and assembled in a single line for delivery to the pressing device. We have seen an unsolicited letter indicating that this machine over a year's period filled within 1/90th of an ounce of complete accuracy in filling one product into 4 ounce containers and 1/50th of an ounce in filling another over the same period. Of particular importance is the fact that the machine is gear driven and does not depend upon chains for the transmission of power to its various operating features.

You will note this machine is entirely enclosed. The driving mechanisms for each side are enclosed by outside covers, so that no working parts are exposed. It has belt conveyors—intake and out-going, no chain drives, whatever. The driving mechanism for the augers is enclosed on the top and is a straight spur gear drive, which can be packed with grease and this insures a much quieter machine. You will note on the close-up photograph that the containers fit up against the filling sleeve, while filling. This makes a tight seal and any dust is drawn off through the exhaust hose shown. The amount of powder to be filled is controlled by individual adjustment cams, for each filling head. These cams govern the number of the turns of the auger and insure an accurate fill. It has been proven that this method of filling is more accurate than weighing, because you do not have to allow for the amount of stream in the air and also you do not have to take the time to allow a scale to trip.

Be sure to get the dope on this machine.



CLOSE-UP OF POWDER FILLER



Something NEW in Tablet Coating Pans!

No. 4 STAND WITH COPPER PAN

The new electric direct drive stand for copper or galvanized iron tablet coating and polishing pans is the first important departure in the design of such pans in many years.

The new Colton Direct Drive Coating Pan is a complete self contained unit having its own direct drive mechanism mounted on the base, thus eliminating all belts and shaftings and making a pan much quieter in operation and very much easier to operate. The shape of these pans and the angle at which they are set are correct to give finest results in coating and polishing and are based on Arthur Colton's many years of experience of building such equipment for the drug industry.

These pans are made of copper or galvanized iron in a complete range of sizes and capacities to suit your requirements. Polishing pans can be lined with canvas at a small extra cost.

Send for our new circular

THE NEW ELECTRIC DIRECT DRIVE STAND

ARTHUR COLTON COMPANY

2620 East Jefferson Ave. Detroit, Michigan

GALVANIZED IRON PAN

Only $9.75

ERTEL SINGLE STROKE BOTTLE CAPPER

Every time the arm comes down another bottle is capped . . . and capped right . . . not too tight to open . . . not too loose to hold. The capper is scientifically geared for accuracy even with inexperienced operators.

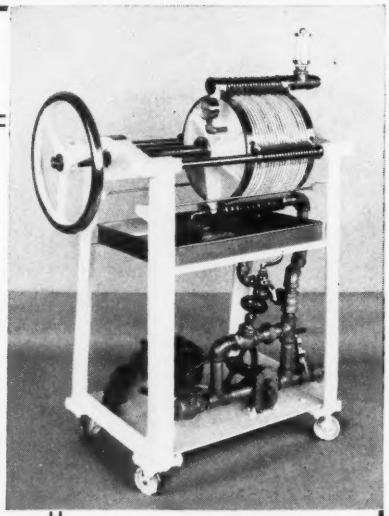
Consider the saving on your purchase price. Costs only $9.75. Consider your saving on operating expense. No electricity needed.

Comes complete with one chuck and can handle caps up to 42m. m. Send cap sample for size. Various chucks interchangeable.

ERTEL ASBESTOS DISK FILTER

Equipped with an Ertel Filter you have a distinct advantage over your competitor. With it operating costs are cut and products are improved. In one quick and positive operation it will filter out cloudiness, sediment and bacteria.

Send a sample of your liquid to our laboratory and let us return it to you clear and polished. Then you will realize you cannot afford to be without one of these machines. Ertel Disk Filters are furnished in all sizes for any capacity.



MANUFACTURERS OF

Asbestos Disk Filters, Neutral Asbestos Filter Sheets, Pumps, Portable Mixers, Glass-Lined Tanks, Allegheny Stainless Steel Tanks, Jacketed Tanks, Portable Vacuum Bottle Fillers, Semi-Automatic Vacuum Bottle Fillers, Capping Equipment.

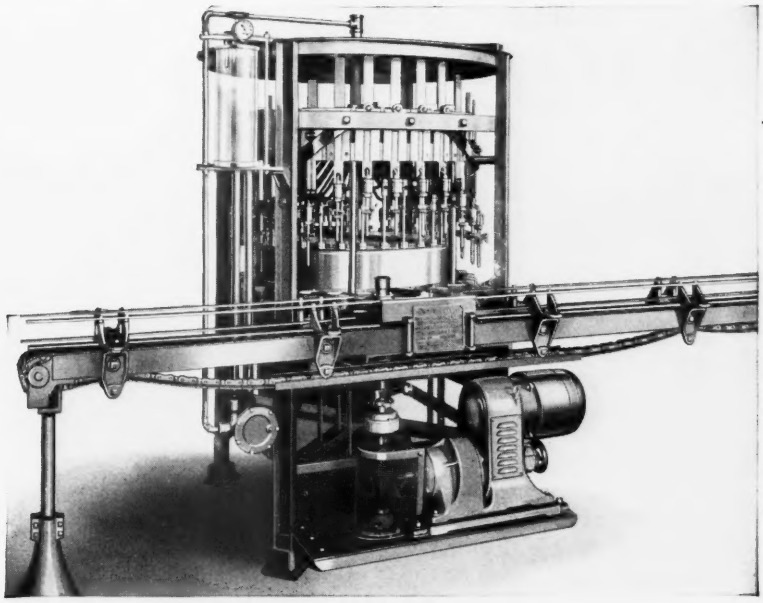
ERTEL ENGINEERING CORPORATION

Dept. B., 120 E. 16th Street New York, N. Y.

The Fastest Automatic Filler Built

The Heart of any Bottling Plant

MODEL C-30
U. S.



ROTARY VACUUM FILLER

» Speed with Accuracy «

Exclusive construction gives—

Uniform Filling
Increased Production
Improved Quality
Greater Ease of Cleaning
Vibrationless Operation
Unexcelled Performance

THE simplest, most efficient and rapidly adjustable filler obtainable. Readily adjustable to handle various sizes of containers. Variably controlled for speeds from 60 to 200 bottles or containers per minute.

Furnished in three sizes or models—
Style O-16 which is provided with 16 filling tubes.
Style A-22 which is provided with 22 filling tubes.
Style C-30 (shown above) provided with 30 filling tubes.

U. S. Automatic Rotary Fillers will be found in successful operation in many outstanding bottling plants thruout the country.

Send for Bulletin fully describing this machine and smaller models.

U. S. BOTTLERS MACHINERY CO.

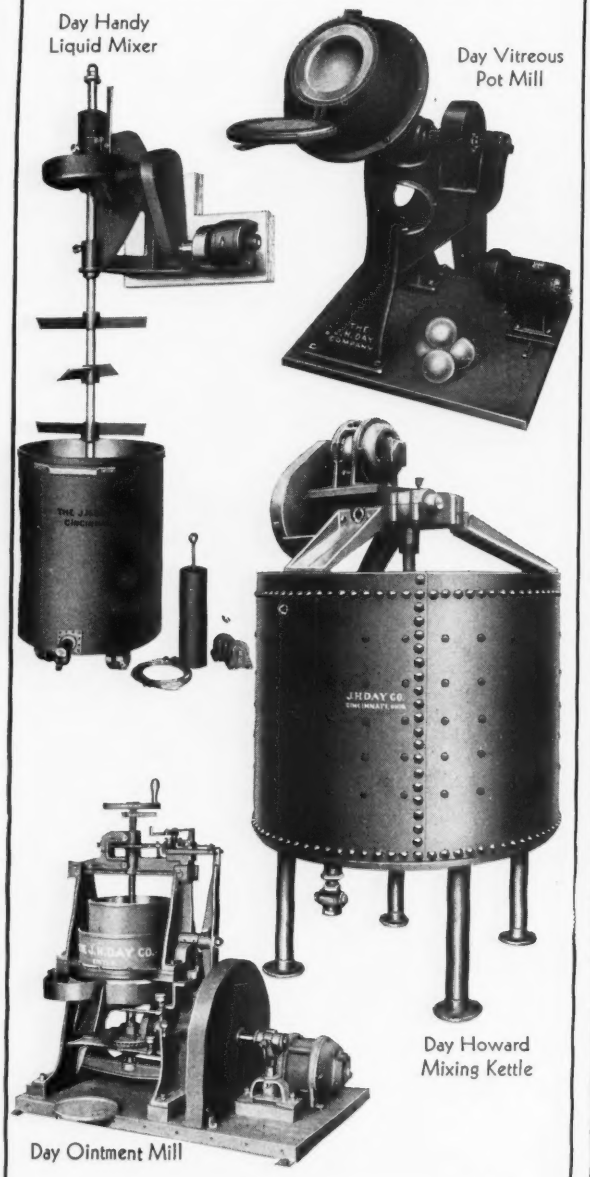
4009-4027 No. Rockwell St. Chicago, Illinois

Offices in all principal cities

DAY GRINDING--- DISSOLVING--- and MIXING EQUIPMENT

Day Handy Liquid Mixer

Day Vitreous Pot Mill



Day Howard Mixing Kettle

Day Ointment Mill

For processing ointments, lipsticks, rouge-masses, tooth pastes and powders, bath-salts, drug-extracts, tablet-granulations, heavy cosmetic pastes, clay packs, extraction of crude drugs under vacuum, heating or cooking during mixing, etc.

Descriptive material on processing equipment for these purposes will be mailed on request. Or if you have a specialized problem in processing, our engineering department will be glad to work with you in determining what equipment is best suited to your needs.

THE J. H. DAY COMPANY

Factories and Principal Offices

CINCINNATI. - OHIO.

PROFITABLE REBUILT EQUIPMENT

Take advantage of the unusual "hard-to-find" equipment listed below!

1—Stokes No. 2C piston type Tube Filler, motor driven.
1—Stokes No. 2B pressure type Tube Filler, motor driven.
1—U. S. Bottlers Combination No. 4 Unit, consisting of Filter with pump and motor and 6 spout Syphon Bottle Filler.
1—Karl Kiefer Diacell Filter, complete with Packer.
3—Paul O. Abbe No. 3 Eureka Jar Mills.
1—Day 12" Ointment Mill, motor driven.
3—Pfaudler 150 gallon tilting type Glass Lined rouge and powder Mixers, with double motion agitators.
12—Pfaudler and Glascote 20 to 75 gallon Glass Lined Tanks.
1—World Improved, Model S, Labeling Machine.
4—Day 50, 200, and 2000 lbs. Dry Powder Mixers and Sifters, motor driven.
3—Day and Robinson 100 and 600 lb. Dry Powder Mixers and Sifters.
4—Day 800 lb. Dry Powder Mixer, steam jacketed.
1—Day 40 gallon Pony Mixer, motor driven, with enameled cans.
1—Day 4 speed Gem Cream Mixer, motor driven.
1—Karl Kiefer 100 gallon re-circulating Percolator with pump and motor.
1—Rotex Sifter, 20 x 48", motor driven.
3—Colton No. 2B Tablet Machines, up to 1/2" dia.
1—Stokes H Tablet Machine, up to 2" dia.
1—Theo. Walter 3' dia. Copper Vacuum Pan with catch-all and condenser.
2—Stokes, Kiefer & Goldman 72 and 80 spout Bottle Washers, motor driven.
1—Colton No. 14 Automatic Tube Filling and Closing Machine.
1—Stokes No. 90C Automatic Tube Filling and Closing Machine.

Also a complete stock of Kettles, Mixers, Filters, Pumps, etc., etc.

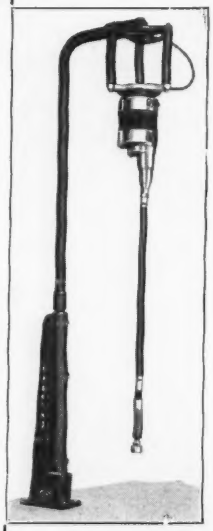
"We buy from single items to complete plants."

STEIN-BRILL CORP.

Agent for George G. Rodgers Co.

187 Varick Street, New York, N. Y.
Cable Address:—Bristen, Tel. WAlker 5-6892-3-4

A REAL Utility Capper For Both LARGE and SMALL Plants



Made to measure for short runs and as an auxiliary machine where many styles and sizes of caps are used, this high-speed capper brings real savings in time and labor.

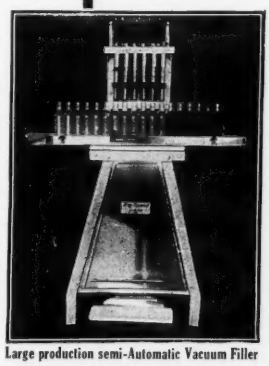
It is equally efficient on jars, bottles and metal containers —setting *any* style or size screw cap up to 54 mm. Maximum capacity above 90 caps a minute!

For further information and illustrated literature, write R. G. Haskins Company, 4648 W. Fulton Street, Chicago.

Haskins
FLEXIBLE SHAFT EQUIPMENT
with Greater Adaptability

TROUBLE FREE!

It's a great feeling to know when you buy equipment that it is going to give you years of service without troublesome—costly—breakdowns. *Hy-Speed* guaranteed machines are designed for hard, continuous work and constructed of the finest materials obtainable. They are *Trouble-Free.*



Large production semi-Automatic Vacuum Filler

You can try any Alsopunit in your plant without the least obligation

WE MANUFACTURE

Mixers
Filters
Fillers
Tanks
Labelers
Cappers
Conveyors

May we send you our NEW catalogue?

ALSOP ENGINEERING CORP.
NORTON STREET
MILLDALE CONN.

"LIGHTNIN" MIXERS

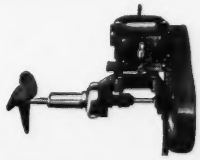
Send for New "LIGHTNIN" Catalog

Send for the new "Lightnin" Catalog just off the press. Entirely new from cover to cover—this handy booklet gives you complete information on "Lightnin" Portable Mixers, both portable and direct drive as well as full details on the increasingly popular angular off-center mixers for fixed applications on large tanks. Explains and illustrates the patented "Lightnin" Double Action which gives complete bottom-to-top turnover plus a slow rotation. This important catalog should be in your files. A request on your firm's letterhead will bring it at once.

Representatives in all principal cities
New York Office—368 Broadway

"Lightnin" Geared Drive Heavy Duty Portable Mixers, ¼ to 10 H.P: 100 R.P.M. to 800 R.P.M.

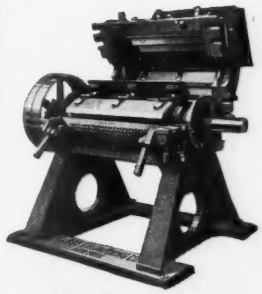
Direct Drive Portable Mixers available in sizes from 1/6 to 10 H.P: 850 R.P.M. to 3400 R.P.M.



"Lightnin" Angular Off-Center Mixers for fixed installations on large size tanks. Sizes 2 to 50 H.P. and larger.

MIXING EQUIPMENT CO.
INCORPORATED
1042 GARSON AVE., ROCHESTER, N. Y.

Does Your Process Need Improvement in



Abbé Rotary Cutter

CUTTING?

Roots, spices, herbs, barks, crude drugs, etc. Abbé Rotary Cutters are durable, efficient, space and power saving. Revolving knives cut material to desired fineness. Laboratory type and full range of production sizes.

Abbé Pebble Mill

GRINDING?

Milling—Pulverizing—Mixing—Blending, wet or dry materials such as face powders, dental powders, rouge, colors, drug extracts and chemicals. Abbé Jar Mills or Abbé Ball and Pebble Mills are equipped for processing at normal, high or low temperatures, under vacuum or pressure. Full range of sizes.

Abbé-Lenart Mixer

MIXING?

Dispersing—Emulsifying—Dissolving cough syrups, liniments, lotions, mineral oil, agar, cold cream, ointments, etc. Abbé-Lenart Mixers for rapid intensive mixing—in half the usual time and space with low power cost. Can be jacketed for heating or cooling or for operation under vacuum.

Abbé-Blutergess Sifter

SIFTING?

Face, toilet and tooth powders, chemicals, talc, sugar, zinc stearate, salts. Abbé Blutergess Sifter trebles production of gyratory or vibrating screens in less time, improves product. Dustproof operation. Easy to clean. Uses either silk or wire mesh screens.

Write for Bulletin No. 40

ABBÉ ENGINEERING CO.
56 Church St. New York, N. Y.

QUICK AS A *wink!*

THE DUO-BLO *Cleans* BOTTLES

two at a time—up to forty a minute—one operator. It takes *all* the dirt out of *all* the bottles.

60 to 70 pounds of filtered compressed air really does the work! You can depend on it!

High speed production calls for Kiefer Automatic Rotary Air Cleaners.

THE KARL KIEFER MACHINE CO.
CINCINNATI, U. S. A.

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MODERNIZE *with*

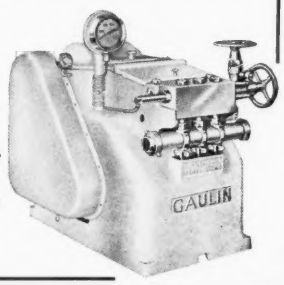
MANTON-GAULIN

Two-Stage Homogenizer

No plant is completely equipped without one of our homogenizers. They eliminate compounding troubles and vastly improve the quality and appearance of your products. Many oils and medicines are made more effective therapeutically and much more palatable by homogenization.

Creams, ointments and liquid and semi-solid emulsions of all kinds are made more stable and more appealing in appearance. Suspensions such as milk of magnesia are made more stable. Medicines, solutions and other liquids are made clearer and more uniform.

If you want to make fine products, make them with an M-G Two-Stage Homogenizer. Many sizes available.



The Manton-Gaulin Manufacturing Co., Inc.
EVERETT :: MASS.

REBUILT EQUIPMENT

2—Colton No. 3 Comb. Tube Filling, Closing and Clipping Machines, motor driven.
1—Stokes gear type, motor driven Tube Filler.
1—Urie Universal Tube or Jar Filler, motor driven.
1—Colton No. 10 worm type Paste Filler.
1—Colton No. 2 Combination Tube Closer and Clipper
5—Pony Mixers, Day and Ross make, 8 and 15 gals.
2—Colton No. 2-B single punch Tablet Machines, ½".
1—Stokes "Eureka" hand operated Tablet Machine.
1—Stokes Rotary "D" 16 punch Tablet Machine.
2—Mulford single punch Tablet Machines, up to 2".
Dry Powder Mixers, several with sifters, lab. size to 4000 lb. cap.
8—World, Ermold and National semi-auto. motor driven Labelers.
1—McDonald "Weeks" type Auto. Labeler, adjustable. Labels front and back in one operation.
1—U. S. Bottlers 22-spout Rotary Vacuum Bottle Filler, monel fitted, with conveyor.
5—Gravity and Vacuum Bottle Fillers, 2 to 6-spout.
1—National MG Powder Filler and Weigher.
1—Ferguson "Packomatic" Filler, Weigher & Sealer.
1—Triangle class SR Carton Sealer.
2—100 gal. Pfaudler Jacketed closed Glass Lined Kettles, ONE NEVER USED; 2—200 gal., ONE NEVER USED.
2—Redd Powder Carton Filling, Weighing, Sealing Units, complete—adjustable.
2—Ferguson Carton Wax Wrappers.

MISCELLANEOUS—Kettles, Drug Mills, Ointment Mills, Pulverizers, Grinders, Sifters, Screens, Colloid Mills, Filters, Filter Presses, Coating Pans, Tanks, Stills, Agitators, Pumps, Boilers, etc. Send for complete bulletin.

What have you for sale? Send us a list.

Consolidated Products Company, Inc.
20-21 Park Row Telephone: Barclay 7-0600 New York, N. Y.
Warehouse and Shops: 331 Doremus Avenue, Newark, N. J.

MORE "FINES" THROUGH 300 MESH WITH ONE PASS

with the new, Dustless

MIKRO-PULVERIZER

REG. U. S. PAT. OFF.

without the use of sifting, screening, separators or fans.

Unusual? Not with the Mikro-Pulverizer.

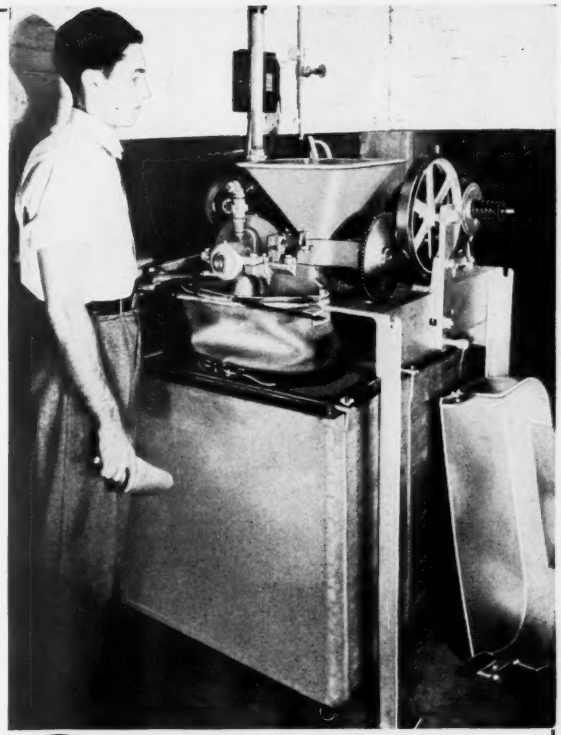
Mikro-Pulverizing produces the degree of fineness desired with absolute and constant control of particle size and uniformity. And in one operation.

For milling drug extracts, face powder, rouge, crude drugs, tooth powder, chemicals and many other materials. Improve your products by Mikro-Pulverizing.

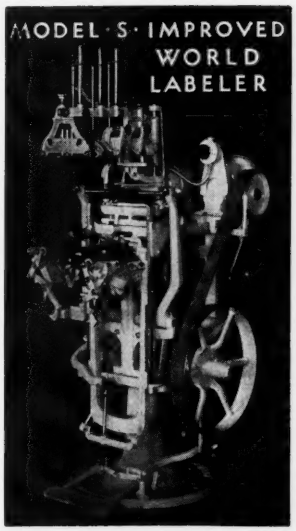
Send us a sample of your product for a test grind in our laboratory. No obligation—of course.

PULVERIZING MACHINERY CO.

107 Valley Road : : Roselle Park, N. J.



Many different fine Chemicals for hypodermic use are ground in this one completely stainless steel No. 1SH Mikro-Pulverizer. Extreme care is taken to insure absolute purity of the products. The pipe leading down to the mill housing carries filtered air. Rubber connection is used between the mill discharge and the receiving box.



The most flexible labeling machine. Easily equipped for labeling any size bottle or jar. Many exclusive mechanical features, developed by manufacturing experience of more than 35 years.

Economic Machinery Company

WORCESTER, MASS.

Makers of complete line of automatic and semi-automatic labelers.

EQUIPMENT IN STOCK

—*Ready for Immediate Shipment*

1—Peerless Air Conditioner-Air Washer for powder room.
2—Stokes & Smith Powder Fillers, motor driven.
1—Kiefer 6 spout Vacuum Filler.
1—Kiefer 5 spout Tray Filler with conveyor.
9—6 and 8 spout Siphon type Fillers.
1—U. S. 12" drum Filter.
4—Alsop internal pressure Filters.
2—Scientific 16" two disc Filters.
2—Colton worm type Tube Filling Machines.
5—Hand operated piston type Tube Filling Machines
5—Collapsible tube Closing Machines.
5—Day Rapid Sifters No. 1 to 3 belt and motor drive.
2—Rotex Sifters.
1—Combs Gyratory Sifter with motor.
1—Nordyke Marmon 20 x 84" Bolter.
2—16" and 20" Schutz-O'Neill Pulverizers.
1—Colton #5 Granulation Mixer.
4—Hobart 3-speed Mixers. 80, 30 and 8 qt.
3—80 qt. Read 3-speed Mixers, motor drive.
1—Reco 22 qt. Mixer.
3—Day 3-speed water jacketed Emulsifiers.
1—100 lb. Day dry Powder Mixer.
2—U. S. and Kiefer rotary Bottle Rinsers.
1—Elyria 300 gal. glass-lined jacketed agitated Kettle.
1—Stokes Eureka Tablet Machine.
6—Galvanized Percolators—10 to 75 gal.
50—Copper steam jacketed Kettles, 20-250 gal. capacity, with and without agitators.
15—Aluminum steam jacketed Kettles, 30-100 gal. capacity.

A complete line of used, rebuilt and guaranteed Process Equipment. Send us your inquiry.

Wanted: IDLE EQUIPMENT—Send us your list

LOEB EQUIPMENT SUPPLY CO.

620 W. Lake St. (Tel. Monroe 5602) Chicago, Ill.

ROSS *Change Can Mixers*

For Mixing TOOTH PASTE, VANISHING CREAMS, OINTMENTS, ETC. . . . . .

The *ROSS Change Can Mixer* is powerful—compact—easily operated. Efficiently and economically mixes Liquids, Semi-liquids, Creams, Ointments, light and heavy Paste.

The *ROSS Change Can Mixer* is versatile—will handle practically any combination of Cosmetics and Pharmaceutical Chemicals . . . . . LOTIONS, SHAMPOO SOAP, MEDICINES, LINIMENTS, COLD CREAM, ZINC OXIDE, TOOTH PASTE, SHAVING CREAM (all kinds), etc.

Sizes range from Laboratory size (1-1/2 gallon container) to very large machines with containers holding 65 gallons.

We can also supply close fitting covers to fit.

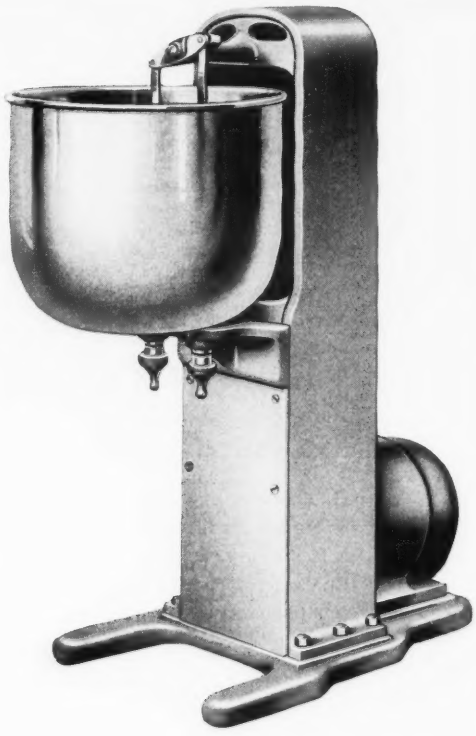
All standard ROSS Change Can Mixers can be furnished with cans and blades of *acid resisting metal* or with hard wood tubs and blades.

Send for New Cosmetic Catalog #10

CHARLES ROSS & SON COMPANY

Manufacturers of Mixing and Grinding Machinery Since 1849
79 EMERSON PLACE • BROOKLYN, N. Y., U. S. A.

THE ELECTRIC HOMOGENIZER FOR SMALL-SCALE MANUFACTURE



This new homogenizer has been designed to meet a very definite need in smaller plant production, experimental work, and as auxiliary equipment to large scale production units. It is particularly suited to limited production and for laboratory purposes where extremely high pressures are not required.

We recommend its use in making all kinds of liquid emulsions and suspensions, and for ointments, creams, lotions, and similar preparations.

This homogenizer has an operating capacity of from 12 to 15 gallons per hour. It is sturdily constructed, with long hour heavy duty motor, and meets all requirements of continuous service.

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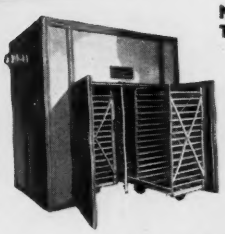

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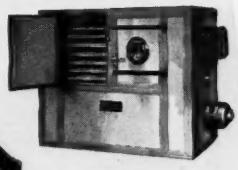
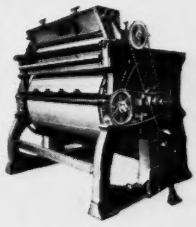


New Proctor Cabinet Tray Dryer

New Proctor Laboratory Dryer



New Proctor Soap Chilling Roll

PROCTOR & SCHWARTZ, INC.
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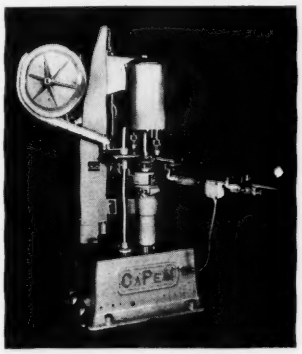

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Perfumers Shelf

SANDALWOOD OIL

SANDALWOOD oil is a very important constituent of many of the popular perfumes of today, and due to its remarkable stability and fixative powers, it is a valuable accessory to the Perfumer's Shelf. The oil is distilled from the wood of Santalum Album—a tree found mainly in the Mysore State of India. It grows prolifically at elevations up to 2,800 feet, and it attains a height of from twenty to thirty feet. The wood is sold at public auction usually in December. The wood is then exported to the principal countries of the world where the oil is distilled from it.

Sandalwood yields about four to six per cent of essential oil consisting of about ninety per cent of santalol. The oil is pale yellow in color and has a soft, delicate, lasting odor. It has been discovered that the more modern is the distillation apparatus, the better is the yield of essential oil obtained.

Some perfumers have found that it is advantageous to store powders in boxes made of sandalwood, since this practice softens the character of the perfume odor. However, this practice is being gradually discarded for the more modern methods of aging and perfuming.

The perfumer finds East Indian sandalwood oil to be useful mainly in the Oriental types of bouquets, but it enjoys a wide range of usefulness in many and varied scents because of its fixative qualities. The oil blends exceedingly well with artificial musks, patchouly oil, clove oil, vetivert oil, and many other products, and it is used principally to produce a pleasant after scent which develops a short time after the perfume is used and the lighter oils have evaporated.

"Do you have a special Bedtime Odor?"

Other types of sandalwood oils available are the Australian, Javan, and West Indian. In odor value the Australian is found to be more characteristic than the other two mentioned but can hardly be called a substitute, although it is used extensively in soaps.

The Javan oil is not available in large quantities and therefore is not a factor in the markets of the world.

The West Indian oil (Amyris Balsamifera), commonly called amyris oil, is of very little use to the perfumer since its odor value is not to be compared with that of the East Indian product, and since it only bears a slight resemblance to genuine sandalwood oil.

The only oil which is of real value for medicinal products is the East Indian oil since this is the only one which is included in the U. S. Pharmacopoeia.

Santalol, which is made from East Indian sandalwood oil, is used in only the finer types of perfume. The acetate, and also several other esters have been made from this alcohol but have not yet been found to be of advantage in producing new types of perfumes.

Star Anise Oil (Chinese anise oil): Soluble in 1.5-3 volumes of 90% alcohol. Anethol content 80-90%. Stable. Used in soaps, etc.

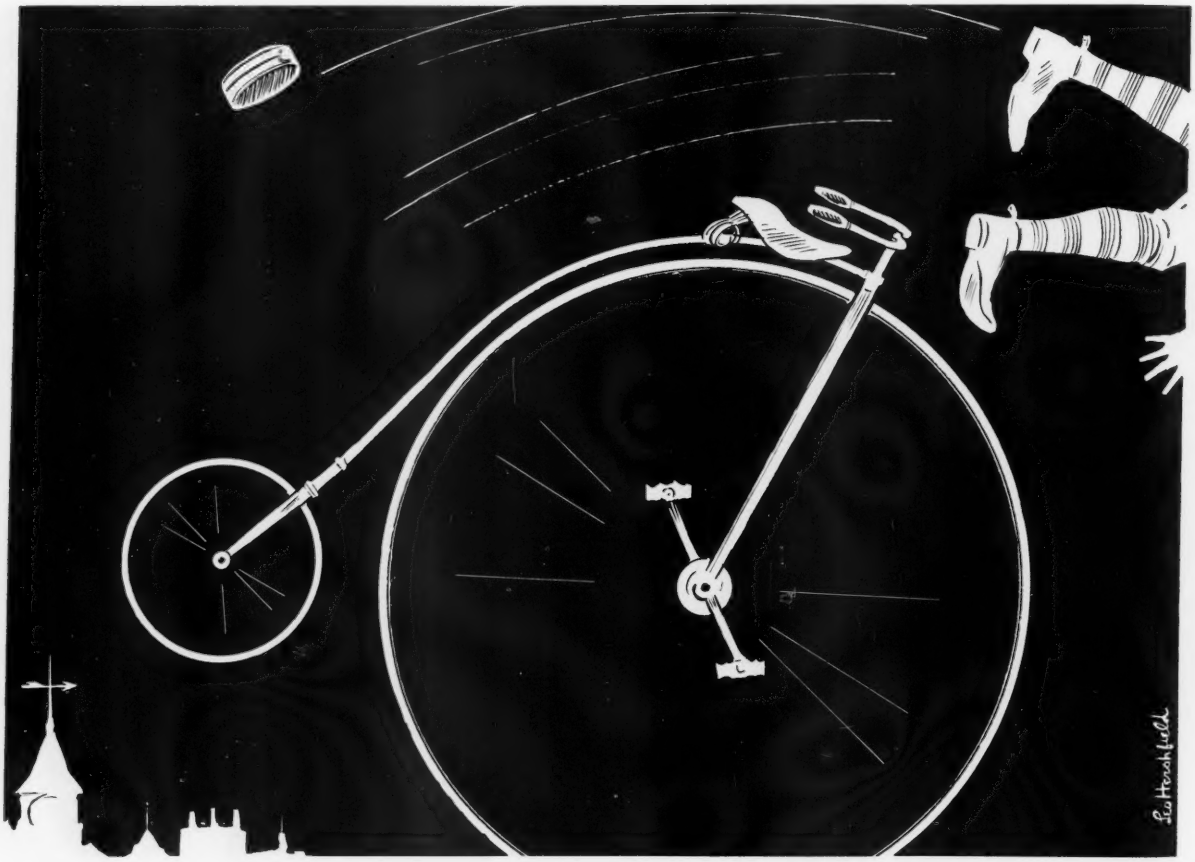
Storax Oil: Soluble in 1 volume of 70% alcohol. Used in perfumes, powder, etc.

Nutmeg Flower Oil: Odor reminiscent of ambrette oil. Taste similar to that of wild strawberry. Stable. Used in perfumes, powder, etc.

Snakeroot Oil: Canadian soluble in 2.5 volumes of 70% alcohol. Odor is a combination of patchouli, ginger and clove. Very stable. Used in perfumes, powders, etc.

Thuja Oil: Odor similar to fern and bornyl acetate. Soluble in 90% alcohol. Fixative. Used in perfumes and in bath preparations.

GONE WITH THE WIND
Are The Old Methods



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The COMPOUNDER'S CORNER

CORROSION OF RAZOR BLADES

When safety razor blades are used with a brushless type of shaving cream, they become dull much more quickly than with a brush type cream. Examination of both types of shaving preparations showed that the pH value of the brushless cream was 7.2, while that of the brush type was 9.4. Since oxygen corrosion of steel occurs readily at a pH of 7.2, but is appreciably retarded at a pH of 9.4, the theory was formulated that the dulling of razor blades was due to oxygen corrosion during the process of shaving. An accelerated corrosion test was made by placing a new razor blade, that could be stropped, free from its paraffin coating, between the folds of a piece of cloth wet with a mixture of 20 g. of the brushless shaving cream and 80 cc. of water. The cloth with the razor blade was supported on the bottom of a beaker inverted in a larger beaker containing the mixture of shaving cream and water, the ends of the cloth extending down into the liquid so that the cloth was continuously wet with the liquid. Thus the razor blade was kept wet with water from the mixture and at the same time was in contact with air. The larger beaker was covered with a watch glass. Each day the blade was dried, stropped twenty-five double strokes, and replaced between the folds of the cloth. At the end of seven days the edge of the blade was very badly corroded. A similar test was carried out at the same time using the brush type shaving cream with a pH of 9.4. The razor blade at the end of seven days was virtually untouched.

With the idea of retarding the corrosion of razor blades during use, potassium chromate was added to a commercial brushless cream with a pH of 7.2, the pH not changing in value. The chromate made a substantial difference in the corrosion of the blade. The addition of potassium chromate to a lathering shaving cream, pH 9.2, did not change the pH value but did improve the corrosion resistance of the blade.

In making comparative shaving tests, new razor blades of the same brand were used and were cleaned and dried immediately after use. Each blade was used an equal number of times by the same person. Five men, using different makes of razor blades, were given a supply of brushless cream with a pH of 7.2 and another supply of the same cream to which potassium chromate had been added. These men noted the number of shaves they obtained with a blade before it became dull and had to be discarded. All reported that they obtained a greater number of shaves with the chromate-treated shaving cream than with the shaving cream as sold on the market. Shaving creams containing sufficient chromate salt to inhibit corrosion have been used by several hundred men without a single reported case of skin irritation.

The presumed action of the chromate in inhibiting rusting is "passivation." Substances other than chromates may also produce the passivation of steel. The generally accepted theory of the action is that a tightly adhering, invisible film of iron oxide is formed on the steel and protects.

Shaving tests were made in which the razor blade was dipped in a solution of a chromate salt after each shave. The results in lengthening the effective life of razor blades were not as satisfactory as when the chromate salt was incorporated in the shaving cream. The effectiveness of the treated shaving cream in increasing the life of razor blades is probably due to the breaking of the iron oxide film in the

"You young men should carry cleansing cream."

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THIS product is quite odorless and tasteless. It is being extensively used in the manufacture of skin creams and lipsticks, where low melting point, in addition to its emollient properties, make it particularly useful. Contrary to the ordinary product, Falba Cocoa Butter, being odorless, can be readily perfumed. Thus the slightly higher cost will be more than discounted by the saving in perfume required, and the cleaner odor obtainable.

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process of shaving and being immediately reformed by the passivating agent present.

The use of passivating agents in shaving preparations has been protected by patent applications in a number of countries. Patents have so far been granted in the United States, Canada, Great Britain, Italy, and France. R. H. Fash, Ind. Eng. Chem.

BEESWAX

According to the Department of Agriculture entomologists, there are reasons why American crude beeswax is used little if at all for refining to the high grade product required for cosmetic and pharmaceutical use. In cooperation with chemists of the California Agricultural Experiment Station, work is being initiated to discover what factors are responsible for the unpopularity of American crude, and, if possible, correct these faults.

Pure beeswax is white, not yellow, no matter what the bees' diet may have been. The yellow color associated with crude beeswax is the result of contamination with pollen from certain flowers, with propolis (the cement gathered by bees for use in weatherproofing their hive) or with iron vats or presses during processing. These, and other impurities, are known to cause great variation in wax characteristics, such as color, texture and bleachability. The domestic crude also differs from the foreign product used in bleaching because of its wide variation in composition.

We cannot share the optimism of the Department of Agriculture as regards the eventual solution of the problem. The great variation in the color of American crude, and especially the variation in its acid number, are some of the more important technical reasons for going to foreign sources. These variations might be controlled. But the technical aspect of the situation is tied up with perfectly logical economic considerations. Foreign beeswax is generally wild beeswax, and is gathered as it is. In this country, bees are domesticated for their honey, which is the primary product. Combs are not taken out and sold for their beeswax content each time the honey is gathered, but are used repeatedly. The wax thus has more than ample opportunity to gather color and other disqualifying impurities. Furthermore, less wax is produced in relation to honey, and the domestic supply would be insufficient, even if suitable.

Along the same lines of limiting the bees' efforts to the production of honey, not wax, paraffin is often placed in the hive to assist them. Much domestic beeswax, therefore contains appreciable amounts of paraffin which would be difficult to remove.

It is not likely that American crude beeswax will soon replace that from foreign sources which enables American refiners to produce a fine, uniform, bleached beeswax.

WITCH HAZEL IN COSMETICS

Chemists, despite their training in scientific reserve are occasionally guilty of important exaggerations, one of the most striking of which is the assumption that with routine research it is possible to isolate active principles of plant and animal products. Examples can be multiplied, particularly in the field of vitamins, of cases in which the pure, synthetic product was proven to be highly effective, but still did not exactly duplicate the action of the natural material. This seems to be the case in the use of witch hazel.

Indians first used witch hazel, and this drug was soon taken over by the early settlers. Its medicinal effect has been ascribed to the presence of a substantial amount of a tannin, but many effects seem to depend upon the presence of unidentified and unsuspected active principles.

The most satisfactory material is made by means of alcoholic solutions and preparations. The most obvious property of witch hazel is its astringent effect, which is so great as to be able to stop the flow of blood from minor cuts. In addition, the freshening effect on the skin surface is most marked.

The immediate application of this product is in skin tonics and shaving lotions, as well as in milks and creams for the skin and in powders and perspiration retarders. Combinations with arnica and sage are especially effective. The net result on the skin of a witch hazel treatment is to leave a fresh, taut, youthful surface.

Skin tonic: sage tincture 5, witch hazel extract 25, borax 5, glycerin 80, alcohol 347.5, perfume 7.5, distilled water 530. Dissolve the borax in the glycerin, and dissolve the essential oils, witch hazel, and sage tincture in alcohol. Mix and add the water. Shake well and then occasionally during eight days, add talc and filter.

After-shave lotion: sage tincture 5, witch hazel extract 75, borax 5, glycerin 80, alcohol 345, eau de cologne essence 5, distilled water 485.

Triethanolamine skin tonic: triethanolamine 5, glycerin 40, alcohol 330, eau de cologne extract 5, witch hazel extract 25, arnica tincture (1:10) 25, distilled water 570.

Finishing cream: glyceryl monostearate 200, glycerin 75, witch hazel extract 150, water 572, perfume 3. Melt the glyceryl monostearate with the glycerin and add water heated to boiling. Stir until homogeneous and when cooled to 35° C. add the witch hazel extract and finally the perfume.

Nourishing cream: lanolin absorption base 400, glycerin 50, arnica (1:10) 50, witch hazel extract 150, distilled water 347, perfume 3. Heat the absorption base until soft (35°C.) and incorporate water previously heated to the same temperature a little at a time. Finally add the other ingredients.

Powder: boric acid 50, precipitated chalk 100, witch hazel extract 5, sage tincture 3, perfume 2, zinc oxide 30, talc 810. W. Rehdern, D. P. Z.

EYEBROW PENCIL

Eyebrow pencils consist of a fatty base to form the body of the pencil along with from 10 to 50 per cent. of pigment. A fat or oil soluble dye may be used to round off the color or, in fact, may be used as the sole color in the pencil. The pigment mixture is passed through a fine sieve and then mixed with part of the fat base in a mortar or a roller mill and rubbed to an absolutely homogenous paste. The rest of the base, warmed, is added and the small amount of dye is mixed into the fat mixture. When used as a supplement to pigment, 0.5 to 1 per cent. of soluble dye is used; as the only coloring material, 10 to 15 per cent. of dye is generally necessary. When dye alone is used it need not be ground with the fatty material but is simply dissolved in the heated fats. The base itself is made by melting the solid ingredients carefully, preferably on the water-bath, and then adding the liquid components. After mixture with the coloring material, the mass is passed through a sieve, warmed again and poured into molds. Add perfume shortly before pouring. The stick mass can be made along the lines of the following formulas. Yellow mineral oil 210, white ceresin 320, beeswax 30, benzoinated tallow 440. Beeswax 42, white ceresin 10.5, soft paraffin 13.5, anhydrous lanolin 13.5, peanut oil 20.5. Ceresin 30, Japan wax 20, beeswax 30, mineral oil 20. Pigments and dyes are obtained from usual sources and specific advice is relatively useless, since the compounder will prefer to develop his own shades.

DENTIFRICE

A tooth paste is made by mixing sodium perborate, mineral oil, a body-supplying component, an emulsifying agent consisting of sodium lauryl sulfate, and alcohols of higher molecular weight. P. J. Breivogel, Ass. William R. Warner & Co., Inc., U. S. Pat. 2, 052,694.

THE COLLOID COLLABORATOR

The Colloid Collaborator, issue A, is a bulletin distributed by the Colloid Chemical Laboratories of New York and devoted to the use of monoglycerides in cosmetics. Most of the pamphlet deals with the chemical background of these types of compounds, with some space being given to the formulation of cosmetics with the help of glyceryl monostearate. Other issues will cover other products sold by this company.

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ADVANCING THERAPY

EXTERNAL USE OF VITAMIN A

Two papers in the *Lancet* seem to provide conflicting evidence about what it is in cod liver oil that makes it help in the healing of wounds. J. Davson undertook experiments to study the tissue response to cod liver oil, and to find out how far this response could be related to the vitamin A content of the oil. He found that subcutaneous injection of fish liver oils into rabbits produced a marked stimulation of phagocytes, fibroblasts, and young capillaries, while liquid paraffin and olive oil (each without vitamin A being added) were relatively inert. Halibut liver oil undiluted gave very similar results to cod liver oil. A sample of halibut liver oil (known to contain at least 100 times more vitamin A than the best preparations of cod liver oil) when diluted 1 in 20 with olive oil, produced only slightly more reaction than pure olive oil; the reaction was about equal to that produced by a 1 in 20 dilution of cod liver oil, and definitely less than that produced by undiluted cod liver oil. The author therefore concluded that, while the cellular stimulation produced by cod liver oil appears to be likely to help wounds to heal quicker, this property is not due to the vitiam A content of the oil.

Sandor, however, has done further work with a petrolatum ointment and a mineral oil which contain 2000 international units of vitamin A per c.c. He considers that the use of these preparations constitutes a real advance in the treatment of injuries affecting a very large area. In septic surgery, he finds that the healing process is speeded up and the treatment simplified. Correspondents to the *Lancet*, commenting on the use of cod liver oil in the treatment of wounds, have raised the point that there is the disadvantage of the unpleasant smell which develops when the oil goes rancid. M. Pyke suggests that rancidity itself may be the therapeutic agent, as it is commonly accompanied by the development of "active oxygen," and that wheatgerm oil (a sample has been prepared with a peroxide number of 1000) or an oxidized derivative from it, being almost colorless and having a somewhat pleasant smell, might overcome the disadvantage in the use of smelly cod liver oil. E. Heidenreich points out that a few drops of turpentine, applied to the dressing and renewed from time to time, is used with good effect against the nauseating smell of cod liver oil.

Cod liver oil and halibut liver oil have been used successfully by direct application in certain eye affections. E. Stevenson has had good results from the external use of cod liver oil for cases of eye injury. B. Chevasse also has used cod liver oil successfully in inflammation and general soreness of the eyelids. The treatment is harmless, and can be used in conjunction with other remedies. The drop bottle from which the oil is used should preferably have a vulcanite cap below the rubber to prevent contact between the oil and the rubber. P. J.

ORAL AND NASAL VACCINES

Much interest has been aroused by the introduction of several vaccines or vaccine-like products intended for oral or nasal administration. Most of these preparations are for prevention and cure of com-

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mon cold, influenza and allied conditions, and from the reports issued it appears that there are definite grounds for claims made for such vaccines. Besredka has expressed the view that some tissues have a low resistance to specific micro-organisms, and that if these weak tissues are immunized the whole of the body's tissues will become immune. Thus in the case of typhoid and dysentery the intestinal wall is the weak tissue. This theory seems to be well supported by an extensive experiment conducted several years ago by the Medical Section of the League of Nations, in which a dysentery vaccine was administered by the mouth to about 30,000 refugees in camps in Greece. As a result, not a single person contracted dysentery. Similarly an outbreak of typhoid in Pas-de-Calais described by Pratt-Johnson was successfully controlled by Besredka's oral method, the vaccine being given in the form of a pill.

A further theory expounded by this worker is that the efficacy of vaccines is increased if they are given by the route of infection. For example, the route along which infection by typhoid occurs generally is the alimentary canal, and hence the oral administration of typhoid vaccine should prove efficacious, which, in fact, it did. In the case of colds, influenza, etc., the usual line of infection is the nasal passages and throat, and it is a consideration of this fact, supported by medical evidence, that has resulted in the introduction of a vaccine for instillation into the nasal passages. Such a vaccine usually contains pneumococci, streptococci, B. *influenza*, *M. catarrhalis* and other bacteria usually present in the nasal and throat discharge, preserved with phenol or other antiseptic. These products are said to be of value in the prevention of colds and influenza and to have the power of reducing the fever associated with the earlier stages of influenza. If such nasal vaccines are used several times daily it has been held that they cut short an attack of cold if it is developing, and used less frequently, though regularly, render the user immune for a varying period. After the first dose or so a slight cold may develop, but this disappears. These vaccines are very convenient to use, and it is presumed that any beneficial action is due to absorption through the nasal membrane.

It is a fact that bacteria are destroyed in the stomach, but the results of oral vaccine treatment would appear to indicate that some absorption takes place before reaching the stomach. D. and R. Thomson working in the Pickett-Thomson Research Laboratory have demonstrated recently that oral immunization is of some value in respiratory infections.

Similar results were obtained by Rockwell, Vankirk and Powell, who administered a starch-adsorbed powder containing the following in each dose:—

Pneumococci	25 billions
B. influenza	5 billions
Streptococci	15 billions
M. catarrhalis	5 billions

This dose was given for seven consecutive mornings fasting, and thereafter once or twice weekly during the season in which colds have a high incidence. In the first year of the test the colds were decreased by 57 per cent. Oral vaccines may be administered in such a form that the stomach cannot attack them, e. g., in keratin coated pills or tablets. Possibly by this means a certain amount of absorption of antigenic principle occurs in the intestine and the number of bacteria per dose, and hence the cost, could be reduced. P. J.

SULFAMIDES IN ERYSIPELAS

Bloch-Michel and his co-workers studied the effect of para-amino-benzene sulfamide on mice infected with virulent hemolytic streptococci and on patients with erysipelas. With the mice, the effect was more marked when virulent strains were used; with strains of mild virulence, the effect was almost absent. However, the results with mice were variable, depending on the virulence of the strains, the quantity of germs inoculated, the time that separated the inoculation from the treatment and the mode of treatment itself. None of the treated animals were immunized; the survivors were just as sensitive to subsequent streptococcic infection as previously. The clinical observations were made on 250 patients with erysipelas. Treatment of most of these with sulfamide derivatives certainly modified the evolution of this disease. Furthermore, sulfamides given at the onset of the erysipelas seemed to diminish the number of complications but had no action on the suppurations once they became established. Presse Medicale.

LIQUOR ANTISEPTICUS N.F. IV

Liquor Antisepticus N.F. IV (and N.F. VI but not N.F. V) passes the Food and Drug Administration test for soluble liquid antiseptics and it is shown to be effective in killing bacteria under practical conditions of use. In the oral cavity it reduces the bacterial count, an average reduction of 96.7% being demonstrated. These findings give added assurance that the standard Food and Drug Administration method of testing liquid antiseptics is satisfactory as a means of estimating the effectiveness of such antiseptics for practical use. G. F. Reddish, J. Am. Ph. Assn.

PHENOL IN HAY FEVER

Vistreich observed the effect of intranasal phenol application in twenty-eight consecutive cases of early and late hay fever. The treatment is not followed by stormy reaction or long convalescence. From 90 to 100 per cent. relief was obtained in 75 per cent. of the cases, from 75 to 90 per cent. relief in 8.3 per cent., from 50 to 75 per cent. relief in 12.5 per cent. and no relief in 4.2 per cent. By intranasal swab tests with serial dilutions of pollen extracts it was proved that this treatment produces an actual decrease in the sensitivity of the nasal mucosa to pollen. By periodic testing it has been found that this state of relative insensitiveness is not permanent. Its average duration in the present group of cases was approximately from seven to eight weeks. Laryngoscope.

OCTYL ALCOHOL

Clerc and his colleagues state that previous work has demonstrated that bodies which lower superficial tension exert a coagulating action on the blood. This action can be demonstrated by simple mixtures in vitro, but it is even more marked following intravenous injection in the dog. They report ten cases, in all of which hemorrhagic states existed from various causes, treated in the attempt to increase the coagulability of the blood. The preparation used consisted of a pure octyl alcohol in 10 per cent. ethyl alcohol, the eventual titer being about 1:1,000. Fifteen cubic centimeters of this solution was injected slowly into the vein. The coagulation time was taken from the vein of the opposite arm immediately before and fifteen minutes after the injection. The most important result of these experiments was the definite harmlessness of the method. The coagulation time was found shortened in eight of nine patients. This was effected with great rapidity. The degree, however, varied from case to case. The duration varied widely but was observed to last from about seven days to eight weeks. The bleeding time seemed to be little modified. The clinical results were favorably influenced and there was a tendency for hemorrhages to disappear. The mode of action remains obscure. Because of the innocuousness of the procedure it can be tried without risk in any case of hemorrhagic state. While further investigation is necessary, these preliminary results are encouraging. Presse Medicale.

ACTIVE CONSTITUENT OF SENNA

According to W. Straub and H. Gebhardt, reporting in Arch. exptl. Path. Pharmakol., vol. 181, p. 399, the active cathartic substance of senna is completely extracted in a 10 per cent. infusion, and consists primarily of an anthranol glucoside which is easily split by weak acids, and constitutes approximately 1 per cent. of the dry leaves. A second glucoside which is resistant to splitting by acids has been obtained in crystalline form and is relatively inactive.

STYPTIC PENCIL

I wish to make a good styptic pencil and would appreciate any suggestions you can offer along this line. Chicago.

The active material in a styptic preparation is always a blood coagulant of some kind. Aluminum and ferric salts have long been known to stop bleeding, but for the most part ferric salts are undesirable because of their strong color. An antiseptic may or may not be included in the composition since it is altogether likely that the aluminum salt mixture will be pretty lethal to bacteria. Heat together 53 parts of crystalline aluminum sulfate and 31 parts of crystalline potash alum. These substances will melt in their own water of crystallization and form a homogeneous melt. Stir in 8 parts of water and 8 parts of glycerine and pour into molds greased with mineral oil to prevent sticking.

readers'

FREEZING SHAMPOOS

How can I prevent my soap shampoo from freezing? In several instances the shampoo on display in a store window has frozen during cold weather and formed lumps which do not go back into solution. Paterson.

If the temperature is low enough, freezing cannot be prevented. It is possible to retard freezing, however, by loading the solution with other substances which lower the freezing point. Thus, alcohol and glycerine are used as anti-freeze in automobiles because their solutions will freeze only at an extremely low temperature. Diethylene glycol and some of its derivatives are also used for the same purpose. Solids in solution may also lower the freezing point, sodium and calcium chlorides being examples. These last may not be used in shampoos, however, since they precipitate soap. Sugar is possibility. In addition, at low enough temperatures, soap solutions undergo gel-formation, which can only be overcome by the use of the right type of soap, determined experimentally.

GRITTY CREAM

We have had complaints recently that our tissue cream develops small, hard lumps, just as if sand were present. We are enclosing the formula for the cream and would appreciate any suggestions you can make for overcoming this difficulty. Tacoma.

In a beeswax-borax cream, a frequent source of trouble is the difference in temperature between the aqueous solution and the wax-oil mixture. If the water is at a lower temperature than the melted waxes, some of the latter will be precipitated in the form of small crystals to give the observed grittiness. To remedy this, make sure that the temperature of the water is the same as or even somewhat higher than that of the melted waxes. In addition, your formula contains somewhat too much spermaceti which is coarsely crystalline. As time passes, this material probably slowly crystallizes out of the cream and may also cause lumps. Decrease the proportion of beeswax to 3 parts and increase the beeswax content by 2 parts.

NAIL POLISHES

I wish to formulate a nail polish but should like some assistance in regard to the various constituents and their functions. Topeka.

Several months ago an article appeared in this magazine which gave many valuable hints in regard to the formulation of nail lacquers. We have a standard suggestion to make—unless you expect your production to be very great, you will get much greater satisfaction from buying a finished product and avoiding the difficulties and expense of production.

A lacquer intended for use on nails is no different from lacquers used for covering other surfaces as regards general composition, although details may differ. The first requirement is the nitrocellulose, qualities differing according to the viscosity of a standard solution. Viscosity is measured by the time of fall of a steel ball through a column of solution, half-second being low viscosity with times increasing to hundreds of seconds. Low viscosity is important in permitting large admixtures of other modifying substances. A film of nitrocellulose would be unsatisfactory since it is brittle, lacking in luster, and showing little adherence. To flexibilize the film, a plasticizer must be added and may be any one of a large number of very high boiling liquids or solids. Camphor, castor oil, phenyl and cresyl phosphates, butyl stearate and phthalate, etc. have been used as plasticizers. To confer luster on the film, natural and synthetic resins such as copal and kauri are much used. Gums, with ester gum as an example, give adhesion. Pigments must naturally be included to give the desired color.

These qualities refer to the film left after the volatile components have evaporated. These are grouped as solvents and diluents. Solvents dissolve the nitrocellulose and consist of alcohols and esters of the ethyl, propyl, butyl and amyl groups. Glycol ethers and esters are also extensively utilized. Diluents are nonsolvents for nitro-cotton but are solvents for the gums and resins; they may be used only in such proportion as not to precipitate dissolved pyroxylin. Proportions of solvents and diluents must be carefully adjusted for the proper rate of evaporation; too great a rate will cause "blushing" while too slow evaporation will be unsuitable for the purpose. In addition, balance must be retained throughout the time of evaporation to avoid premature precipitation of some of the compounds. Solvents and diluents should be chosen with as little odor as possible (the glycol ethers and esters are especially suitable). It is not possible in this place to give a really good formula for a nail polish since the nature of the finished product will vary widely according to the quality of the raw materials and according to the procedure in manufacturing. Before you embark on any extensive course of experimentation it is advisable to read several of the standard works devoted to the subject of nitrocellulose lacquers.

POWDERED GLYCERINE

I have heard of a preparation of powdered glycerin and should like to have any information you can supply me as to how this product can be made. New York.

Since we have never heard of nor seen a "powdered glycerine," you will admit that you have given us little guiding information. Nevertheless, we speculate. Glycerine is a thick liquid with the general solubility properties of water; that is, substances that will absorb water are likely to absorb glycerine. Thus, colloidal clay or bentonite will absorb large amounts of aqueous liquids before they become actually wet. Using this as a basis, make a very thick paste of glycerine with either of these substances and then mix with precipitated chalk to obtain the desired powder. It may be necessary to heat the glycerine in order to get it to flow more readily.

SOLID PERFUME

How can we make perfume in solid form to be sold either in jars or in the form of sticks? There seems to be various merchandising points in connection with preparations of this type that are definitely attractive. Springfield.

You might possibly be confusing novelty with actual merchandising appeal, but this department tries to limit itself to technical matters and you can work out your selling campaign along your

questions

own lines. Solid perfume can either be an alcohol-soap gel or a highly perfumed wax-oil mixture. In the first case, ten to fifteen per cent. of a neutral powdered soda soap is dissolved in hot alcohol. When the mixture has cooled sufficiently, but before it has set, stir in the predetermined amount of perfume, pour into jars and allow to set to a gel. This mixture is suitable primarily for jars as it is inclined to be soft and evaporates quite rapidly. The choice of perfume is limited to those that are stable in the presence of soap. Alcohol may be saved by diluting it with water, but the alcoholic concentration must not fall below that necessary for complete solution of the perfume oils. The wax gel is made along the lines of a lipstick, with about one-third of a wax mixture to two-thirds of the oil mixture. Melt the waxes and oils to a clear solution, cool to the point at which it is safe to add perfume and then pour into molds. The special difficulty in this preparation lies in the utilization of absolutely odorless raw materials which will not interfere with the perfume.

OIL LEAKAGE

The cold cream we make is a fine white product which seems to be perfectly stable, but after about half the jar has been used, the surface exhibits oil droplets. Is this an indication of a broken emulsion and can it be overcome? Boston.

The presence of oil droplets does not necessarily mean that the emulsion has begun to break down but it does mean that the emulsion is not properly balanced. In addition to the water phase, oil phase, and emulsifying agent, a stable emulsion must almost always contain an auxiliary emulsifier as a stabilizing agent. With an oil of reasonably low viscosity, this auxiliary may not be enough, the thin oil escaping from the individual globules. Petrolatum, which increases the viscosity of the oil, has the power of preventing, to a large extent, oil leakage from the cream. About five parts of petrolatum will have a definite effect in preventing oil leakage.

OILY SKIN TONIC

I should like to improve my skin tonic by including an oily material, a vitamin preparation if possible. All experiments I have made, however, have been fruitless since I want to make a perfectly clear solution. Can you give me any experimental leads along this line? Milwaukee.

You're thinking along the right lines when you consider the incorporation of vitamin F in your products and vegetable oils in general should be valuable adjuncts. But as you say, these products are unfortunately insoluble in the usual skin tonic mixtures. Concentrated alcohol will dissolve oils but the alcoholic content of the usual tonics is not high enough. In hair tonics, the oil is permitted to float on the surface of the skin tonic, and this might be possible in other preparations if consumer acceptance could be accomplished. The best approach would seem to be along the lines of transparent emulsions or possibly coupling solvents. In the latter case, it is often possible to add a third ingredient that will cause two mutually insoluble substances to form a homogeneous solution. Various glycol ethers have this property of acting as coupling solvents to a marked degree. A possibly better approach lies in the use of sulfonated oils or other emulsifying agents soluble to a clear solution in weak alcohol. If these are used in sufficient excess, the oil droplets will be very small and virtually transparent. The final solution will be perfectly transparent or possibly very slightly opalescent. Coupling solvents may also be utilized here to attain perfect transparency. Difficulties may well be encountered if the oil is highly acid.

CREAM PRESERVATIVES

What preservatives are most useful in creams requiring preservation? Is there any danger that these preservatives might in any way adversely affect the skin of the user. Trenton.

The first requirement of any preservative intended for cosmetic use is that it be absolutely non-toxic and completely harmless to the skin in the concentration used. The compounds we mention have all passed these requirements. They include formaldehyde; paraformaldehyde; methyl, ethyl, propyl, benzyl para-hydroxybenzoic esters; para-chloro-meta-cresol and meta-xylenol; chloro-thymol; oxyquinoline salts; etc. Benzoic acid as such is a good preservative but is generally present in creams in the form of a benzoate salt which is far less effective. Since these compounds are used to the extent of 0.1 to 0.2 per cent. on the total weight of the batch, odor, where present in the preservative itself, is not likely to be a disturbing factor. Formaldehyde and paraformaldehyde might possibly react chemically with perfume, but the other compounds are inert in this respect. Antioxidants are especially important in creams since deterioration of oils is as likely to be due to the action of air as to bacterial attack. These compounds act by taking up oxygen before it can reach sensitive oils and good examples are maleic anhydride and citric acid. About half as much of these compounds as preservatives is required.

RADIOACTIVE CREAMS

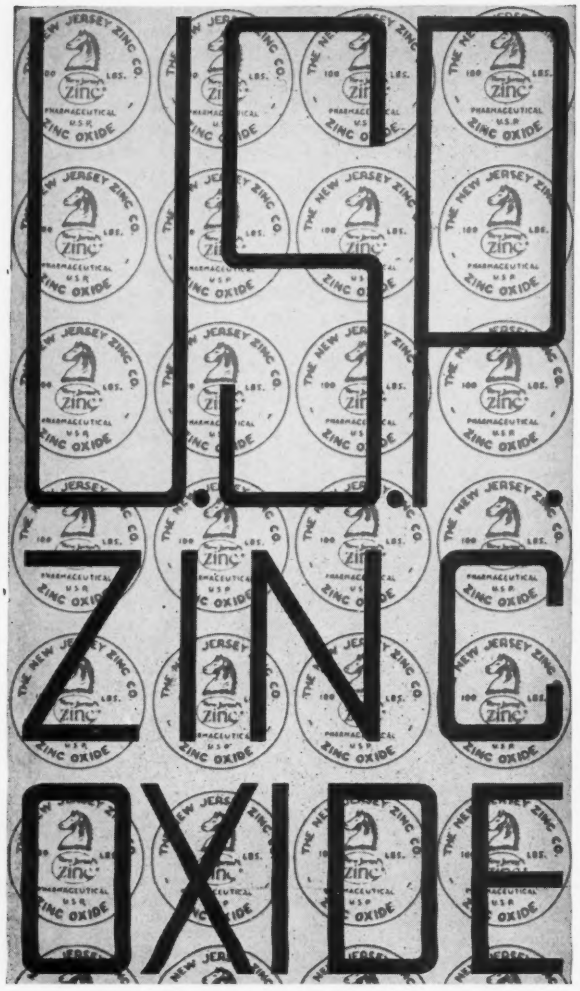
We contemplate the addition of certain thorium salts to toilet creams to obtain a beneficial action on the skin. We feel that radioactive compounds should be useful in bringing about some degree of rejuvenation, but before going on with our research we wshould like to get your opinion on this matter. Chicago.

Personally, we would prefer dynamite. The indiscriminate use of radioactive compounds near the body, even accidentally, has been proven dangerous time after time. Chemists working with radium take the most elaborate precautions, including thick lead shields, to keep radiations away, while serious illness resulting in death has followed the internal use of radioactive waters. The continued application of creams containing radioactive ingredients to the skin might well result in extensive skin damage. Apart from these completely disqualifying properties, it is doubtful that thorium compounds could have any beneficial effect upon approximately healthy skins.

SUN TAN PREPARATIONS

What, in your opinion, is the most popular type of preparation for preventing sun burn? I was impressed by your advice to start working on this problem early and would like a few leads. St. Paul.

We have good reason to believe, from personal observation at the beach, if nothing else, that the days of sun oils are numbered. All that can be said in their favor must be said by the manufacturer—that they are easy to manufacture. They are messy to apply, unpleasant on the skin, and completely unesthetic in appearance. If a liquid preparation is preferred, a solution of the selected screen in the proper concentration of alcohol and water will give an invisible, protective film. Protection is limited, however, to the action of the sun, and these aqueous-alcoholic lotions seldom have definite cosmetic value. A well-prepared liquid cream or lotion makes just as good a medium for the screening compound, but will leave an invisible film that can be beneficial in protecting the skin from the action of wind as well as sun. Finally, vanishing creams, oily or non-oily, have the advantages of the liquid creams and in addition permit the use of greater concentrations of oils and other important ingredients. This year, solutions and lotions can expect the greatest popularity.



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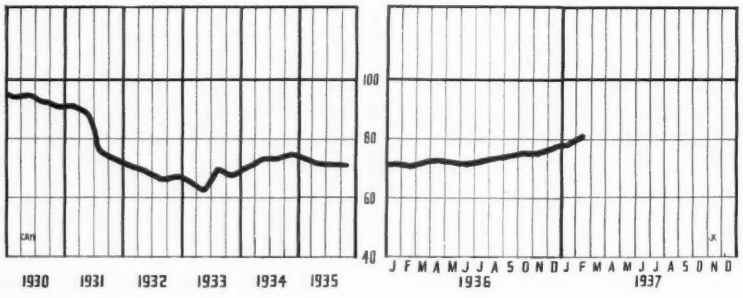
Aconite root 1c
Agar agar No. 1 8c
Almond oil, sweet 8c
Balsam Copaiba 12c
Peru 10c
Beeswax, white 4c
Bergamot oil 90c
Camphor 3c
Camphor oil, Sass. 1c
White 3c
Cardamom oil $3.50
Carnauba wax No. 1 3c
Cassia oil, redist. 5c
Cedar leaf oil 20c
Cedar wood oil 1c
Citronella oil, Ceylon 19c
Java 10c
Clove oil 12c
Cocoa butter 2c
Coriander oil $6.50
Deer tongue leaves 3c
Eucalyptol 11c
Eucalyptus leaves 2c
Eucalyptus oil 6c
Eugenol 30c
Ginger oil 40c
Glycerine CP 3c
Henbane leaves 1c
Horehound herb 1½c
Ipecac root 15c
Irish moss 1c
Japan wax 1c
Lemon oil, Calif. 50c
Italian $1.05
Lemon grass oil 17c
Menthol 20c
Mullein flowers 5c
Nutmeg oil 3c
Olive oil, edible 40c
Orange oil Italian $1.00,
Petit grain oil, S. A. 20c
Sassafras bark 1c
Sassafras oil, Art. 2½c
Senega root 19c
Stearic acid Tp 1½c
Tansy oil 15c
Thymol 5c
Wahoo bark of tree 1c
Wild cherry bark, green 5c
Wormseed oil 45c

Down

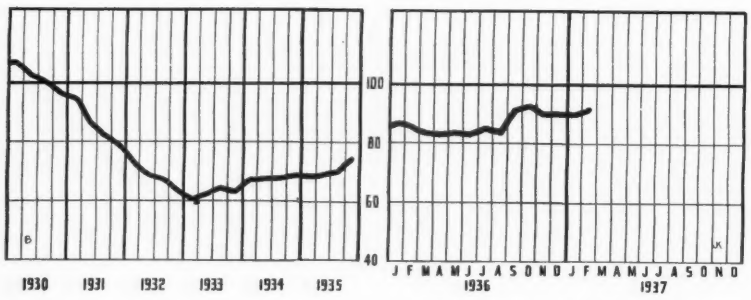
Benzoin gum, Sumatra 18c
Buchu leaves 5c
Cajuput oil 3c
Cinnamic aldehyde 15c
Geranium oil, Bourbon 15c
Grape fruit oil 35c
Manna, large 2c
small 2c
Safrol 3c
Santonin $10.00
Tartaric acid 1c

25 Cosmetic Raw Materials—Unweighted Price Index. 1926 = 100.



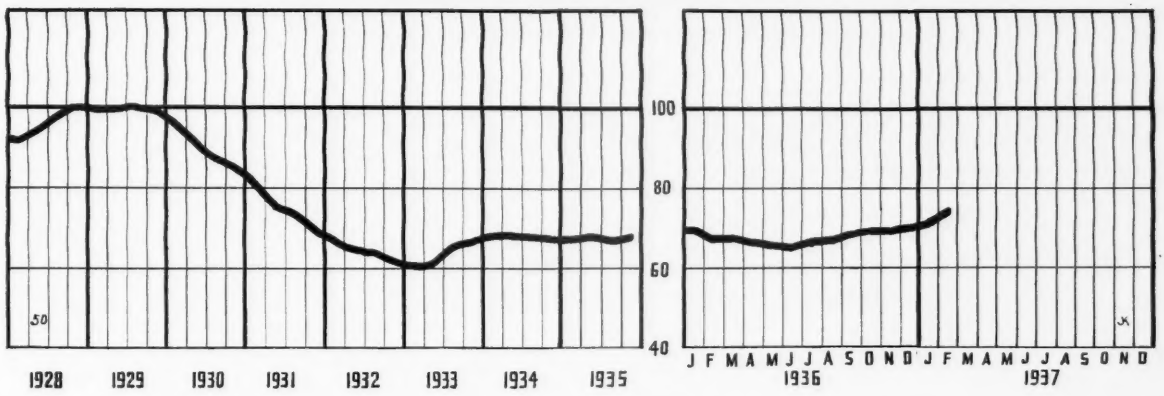
Cosmetic raw materials averaged a net increase in price. Copaiba increased from 30 to 42 cents; Peru balsam rose 10 cents to $1.15; beeswax jumped from 34 to 38 cents; glycerin continued its rise of recent months to reach 25 cents; Japan wax was one cent higher at 10½ cents; menthol increased 20 cents to $3.30; stearic acid went up to 15¼ cents; tragacanth reached $2.75 compared with the previous $2.50.

15 Botanicals—Weighted Price Index. 1926 = 100.



The botanicals index rose 1.2 to reach 91.6 for February. Increases were noted in agar, from 72 to 80 cents and in ipecac, from 90 cents to $1.05, while buchu declined 5 cents to 55 cents. An exceptionally good demand for ipecac for cough preparations during the recent epidemic found this market short of supplies and the shipment market in a similar position.

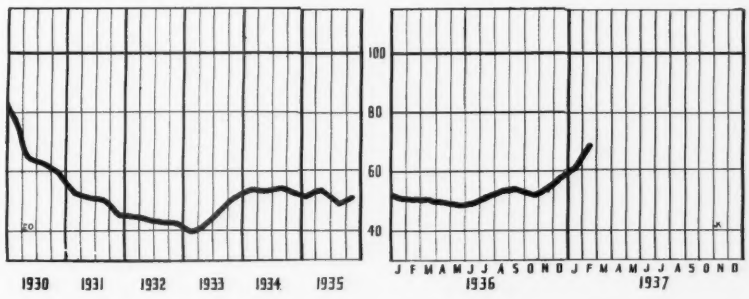
50 Raw Materials—Weighted Price Index. 1926 = 100.



General price activity was reflected in the indexes for February 1937, with the 50 commodity index rising from the 71.2 of the previous month to 74.6 for February. The essential oil market was particularly strong. A buying wave in Japan because of the fear of devaluation sent many commodities originating in that country to higher levels. Japanese camphor, menthol, and the camphor oils all registered material gains. As a matter of fact there were few if any weak spots in the raw material markets as a whole.

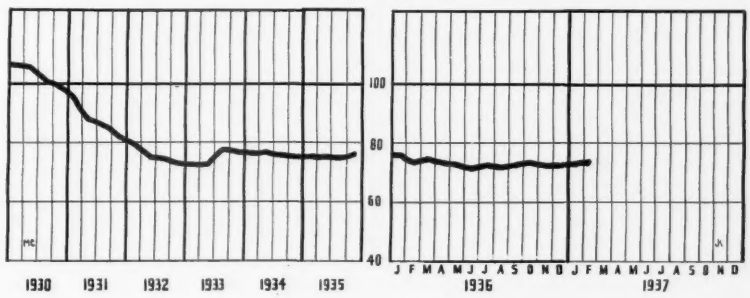
15 Essential Oils—Weighted Price Index. 1926 = 100.

The essential oil index reflected important speculation and governmental control and increased very sharply from 60.7 to 69.1 (an average increase of 13.9 per cent). Bergamot jumped from $2.95 to $3.85; cassia increased 5 cents to be quoted at $1.00; citronella rose from 38 to 48 cents; clove oil increased 12 cents to $1.22; eucalyptus was up 6 cents to 46 cents; lemon oil was at $3.90 compared with the previous $2.85.



15 Medicinal Chemicals—Weighted Price Index. 1926 = 100.

The medicinal chemical index reflected the stability of chemical prices by changing slightly from 73.3 to 73.5, menthol increasing from $3.10 to $3.30 per pound. It was generally believed here that the advancing Japanese market for natural menthol had about run its course as late cables indicated a slightly easier tendency in the shipment market.



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GUM TRAGACANTH

Gum tragacanth continues its galloping advance. Number 1 gum is currently being offered at from $2.75 to $2.85 per pound with number 2 gum at from $2.30 to $2.35 per pound. Still higher prices appear in sight. The position of this item can be measured by the fact that in July, 1936 the spot market price of number 1 gum was $1.30.

Dealers report that the very sharp advances in this item have slowed up demand materially. A trend has also been noted to the lower grades of gum with manufacturing consumers trying to get value out of these lower grades. The rub is, however, that while the lower grades are cheaper in price the recent trend has been for them to also advance proportionally with the higher grades.

The strength in gum tragacanth is directly attributed to the fact that this item is now under complete domination of the Persian government and they are playing it for all it is worth. If the market goes much higher, however, they may overplay their part and cause a trend to substitutes which will lose them their most important markets forever.

A report by the Department of Commerce states that the 1936 Turkish gum tragacanth crop will amount to not more than 500 or 600 bags. This greatly reduced yield is due to heavy rains during the period when incisions were made in the shrubs which washed away the major portion of the gum. While the 1936 crop is short the above figures are only rough estimates and reliable estimates will not be available for another two months.

According to this report, the export trade in Persian gum tragacanth was taken over by the Persian Government and export concessions granted to a European concern. Average annual Persian gum tragacanth crop was estimated at about 50,000 bags. The European concern has been studying conditions in various foreign consuming markets and has taken preliminary measures for the effective distribition of the 1936 Persian gum tragacanth crop.

The Syrian crop also is said to be short due to heavy rainfalls during the incision period.

CORIANDER OIL

Few suppliers have any oil to offer. Stocks are being distributed in lots of a few ounces only, to meet in part, the requirements of regular customers.

Russian coriander seed is the only grade that has an oil yield sufficient to make production economical. The yield from Russian seed is about 1 per cent. and this has accounted for the fact that production costs on this oil have always been high. The last crop of Russian seed was said to have been almost a complete failure. It is also reported that exports of seed and oil are now prohibited from Russia, the total production being required for home consumption.

The only other coriander seed available is from Morocco. This seed, however, has an oil yield of less than ½ of 1 per cent., which makes it uneconomical for oil production. Morocco seed is not over plentiful and has been rising in price. Should it be necessary to utilize this source of supply in the present emergency it goes without saying that the price of the oil will be almost prohibitive.

Stocks of Russian oil still available on spot are being offered at from $22 to $24 per pound. No relief can be expected until a new Russian crop of seed is harvested next summer.

MENTHOL

Japanese menthol is again higher on spot at $3.30 per pound in case lots and $3.40 per pound in smaller quantities. This is a reflection of the primary market position rather than any special strength in this market.

Japanese production of menthol from the last peppermint oil crop was good—totaling some 13,000 cases. There has also been no necessity on the part of the large consuming countries to buy material quantities of menthol on a rising market. The strength in Japan, therefore, can be attributed primarily to buying at home. This situation has been induced by recent fear of inflation of the yen. Devaluation of Japanese currency has caused such uneasiness in Japan that there has been almost a wild scramble to convert money into presumably safer commodities.

Japanese have been reported as buying everything in sight, even worthless objects, in their efforts to convert money into something more tangible. This has had its effect on all Japanese commodities which are materially higher in price.

It is reported, however, that late cables reaching here from the primary market have indicated a slightly easier position in menthol, so that it is now believed that the top of the present price move has been reached.

Production of menthol is now definitely known to be good and there is no likelihood of a shortage. The New York market failed to keep pace with the supply market in spite of the increased consumption during the recent epidemic of colds, grippe and flu. The large buyers are evidently using surplus stocks rather than affect replacements at present levels. Efforts to raise this market to somewhere nearer the replacement position have met with little success.

Quantities of menthol said to be close to 1,000 cases are in route to this country which should be sufficient to take care of all requirements and commitments.

OLIVE OIL

A sharply higher market is noted for edible grade olive oil, the spot range being from $2.40 to $2.75 per gallon. The strength in the market can be attributed directly to a further shrinkage in spot stocks and uncertainty regarding future supplies.

Importers here are in receipt of information to the effect that Spain has embargoed all exports of olive oil. Some importers expressed doubt that all shipments will be embargoed but think rather that shipments are being suspended for a time.

In any event it is expected that olive oil will be difficult to obtain here and spot stocks of edible and denatured oils were necessarily advanced.

The situation in olive oil used for edible purposes is particularly tight. Supplies here have run down sharply during the strife in Spain. Meanwhile Italian prices have risen sharply and now Italy also has suspended shipments. In Greece it is necessary for exporters to get permits so that factors here are at a loss as to where to turn for additional supplies.

Present information indicates that olive oil producing countries of the Mediterranean Basin, exclusive of Spain, will produce about 438,000 short tons of oil in 1936-37. If these forecasts are correct the output in these countries will not only be under the 474,000 tons estimated to have been produced in 1935-36, but also be much below the 6 year average, 1929-30 to 1934-35, of 545,100 tons.

VANILLA BEANS

All grades of vanilla beans continue strong. This is particularly true of the Bourbon beans. New crop Madagascar beans have just arrived in France and although these receipts have amounted to one half the total crop the market position there has not weakened even slightly.

Total production of Bourbon beans is expected to be 300 tons which must last the rest of this year. No relief from this small production can be expected for a full year so that factors here are of the opinion the market will be fully maintained.

During the first two weeks of the new year, spot demand was said to be small but already it is becoming more evident that the larger summer consuming season is approaching. With a heavier demand in prospect over the next several months, and in view of the small Bourbon production and consequent strength in the French market, dealers have expressed the opinion that before long a Bourbon market of above $4.00 is most likely.

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CITRUS OILS ITALY

The Italian essential oil market during the fall of 1936 was subjected to a number of important influences, the reaction to which has been a rapid advance in prices.

A series of governmental regulations were issued beginning with the Royal Decree law, dated April 20, 1936, effective on September 2, 1936, which provides for two requirements including a prohibition of the manufacturers of lemon oil by distillation through the application of the Peratoner method and similar processes: Any quantity over 100 grams of concentrated citrus essences destined to a foreign country must be accompanied by a certificate of purity.

The production and importation into the realm of limonene, pipilene, and dextrogyrate spirits of turpentine with an optical rotation index greater than plus 30 degrees is prohibited, as is likewise the importation of the terpenes of lemon or of orange. The object of these decrees is principally to protect the industry against adulteration.

The winter lemon crop of 1936-1937 was reliably estimated at about 35 per cent. less than 1935-1936. Accordingly the price of culls was advancing. Another factor which assisted in driving up the market was the disappearance into the hands of persons not connected with essential oil trade of a large share of the stocks known to exist in the country. Devaluation of the lire was another factor.

As far as bergamot oil was concerned control in Italy was absolute. On spot the price was again advanced to a level of $3.85 per pound.

EUCALYPTUS OIL

Eucalyptus oil continues scarce both in Australia and in the spot market. Prices in this market have again risen and are now on the basis of from 46c to 49c per pound as to quantity.

Production in Australia has been small and no relief from this situation can be expected for several months yet. The scarcity of this commodity in the spot market, however, was further aggravated by the ship strike on the Pacific Coast.

Eucalyptus oil is shipped from Sydney and Melbourne. Some of it comes directly through the Panama Canal to New York. Much of the oil, however, is shipped to Los Angeles and thence transshipped down the Coast. This oil is now held up.

One dealer alone reports having 14,000 pounds of eucalyptus oil held up on the Pacific Coast. Enough oil is said to be off the Coast of California to materially ease the situation here once it is possible to affect transshipment to New York.

CITRONELLA OIL

The high cost of replacement is said to have justified the sharp advance in the spot market. Prices for Ceylon oil now range from 47c to 56c per pound and Java oil from 48c to 50c.

The United States is by far the largest purchaser of Ceylon citronella oil having imported 568,907 pounds in 1935 and 462,701 pounds during the first 9 months of 1936.

TARTARIC ACID

Leading producers of this material announced a reduction of 1c per pound and are now quoting for prompt shipments only as follows:

Crystal, granular or powder bbls. 22½c per pound; kegs net 100 lbs. 23¾c per pound, f.o.b. New York.

PSYLLIUM SEED

The 1936 French psyllium crop amounted to approximately 100 metric tons, according to estimates. The crop was no larger than the 1935 crop, which was the smallest crop since 1927. The estimated production of psyllium seed in France in metric tons during the past 10 years was: 1927, 500; 1928, 300; 1929, 350; 1930, 1,400; 1931, 2,000; 1932, 2,500; 1933, 500; 1934, 170 to 250; 1935, 90 to 100 and 1936, 100.

At the end of November, 1936, stocks of good quality psyllium seed were estimated at not more than 150 metric tons, whereas stocks of unsalable deteriorated seed amounted to approximately 200 metric tons. Practically all of these stocks were in the hands of the growers. The limited stocks on hand owing to the small 1935 and 1936 psyllium crops have resulted in a continuation of the upward trend in prices since the spring of 1935.

Recently France and other European countries have become interested in the use of psyllium and sales to countries other than the United States are increasing in importance. With this broadening of the market, low stocks, and prices which vary very little above the cost of production, an active demand from the United States might be expected to cause a further rise in prices.

In view of the improvement in psyllium prices which has occurred already it is probable that the January-February sowings will be larger than 1936 and with favorable weather conditions the 1937 crop should also prove larger.

CLOVE OIL

Prices for clove oil have advanced several times during the past month. Dealers are now asking as much as from $1.22 to $1.27 per pound for spot stocks.

When based on present production costs prices should be from $1.25 to $1.30 per pound and the market will likely go to these levels, it was said.

The entire spice market has been materially strong for some time, and cloves are no exception. Quotations on Madagascar material rose to 17¼c to 17½c per pound and Zanzibar were 17½c to 17¾c. Marked strength has been noted and the general situation has been reflected in prices on materials derived from this spice.

ALCOHOL

The Bureau of Internal Revenue reported that production of ethyl alcohol during December, 1936, approximated 19,943,178 proof gallons. During the month, it was said, tax-paid withdrawals aggregated 3,315,277 gallons.

Stock remaining in warehouses at the end of the year were listed as 9,702,285 proof gallons. Approximately 17,456,493 proof gallons were removed for denaturation during the month.

Production of completely denatured alcohol in December approximated 1,831,934 wine gallons, while the specially denatured output totaled 9,246,796.

SENEGA ROOT

An exceptionally heavy spot demand for this material during the widespread illness caught this market short of supply. As a result prices have been marked up sharply to the basis of from 55c to 57c per pound.

Shippers in Winnipeg report the district cleaned out. Should this be the case there will be no further shipments to this market until the frost leaves the ground in the Northwest and collection can again commence.

The primary market factors, however, have a reputation for shrewd dealing and it is just possible they are sitting tight.

LIME OIL

A firm market prevailed for lime oil. An exceptionally good demand prevailed. This was attributed to the fact that many buyers of lime oil associate this production in their minds with the citrus oils. It is believed that the strength in the citrus oils has therefore induced a larger and more active interest in lime oil.

Stocks both in the shipment market and on spot are sufficient for immediate requirements. Furthermore there is a new crop of limes coming on the market shortly so that there does not seem to be any expectations of a rising market in this item.

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